## Model (1)

### 1 Choose the correct answer:

1. The leaves of most desert plants are ........................ .

   a. are large and broad
   b. are small and have thorns
   c. broad and have thorns
   d. lose water easily

2. Which of the following examples of movement cannot be observed?

   a. A train moving on rails.
   b. The movement of the moon around Earth.
   c. A ball moving in the air.
   d. A pen falling down.

3. What happens to organisms that do not have methods that help them adapt to environmental conditions?

   a. Their number increases.
   b. They extinct.
   c. They remain the same.
   d. The biodiversity of the ecosystem increases.

4. The organ which is responsible for the sense of sight is the ........................ .

   a. ear
   b. eye
   c. nose
   d. skin

5. Which of these materials reflects light better?

   a. Wood
   b. Mirror
   c. Plastic
   d. Cardboard.

6. Which of the following examples represents a pull force?

   a. The attraction of the Earth to an object.
   b. Pushing a box to move it.
   c. The player kicks the ball.
   d. The goalkeeper stops the ball.

7. The energy produced when the electric heater is turned on is the ........................ energy.

   a. electrical
   b. sound
   c. thermal
   d. chemical

8. Fish breathe the dissolved oxygen in water through........................ .

   a. skin
   b. lungs
   c. gills
   d. stomach

9. To calculate the velocity of a body, we need to know........................ .

   a. distance only
   b. time only
   c. energy and time
   d. distance and time

10. What are the two organs that represent the central nervous system?

   a. Cerebellum and the vertebral column.
   b. Spinal cord and the brain.
   c. The sensory and motor system.
   d. The brain and medulla oblongata.

## 2 Complete the following sentences using the given words:

**(respiratory – balanced - digestive - movements - structural - behavioral - 4 - 100 - unbalanced)**

1. Bees are similar to humans in communicating through .................................. .
2. A body that travels a distance of 20 meters in 5 seconds, so its speed is .................................. m/s.
3. When .................................. forces act on a static body, it will move.
4. Migration of birds to warm places is an example of .................................. adaptation.
5. The system that digests food and obtains nutrients is .................................. system.

## 3 Put (✓) or (✗) in front of each of the following sentences:

1. Communication between ants is through their sense of smell. (   )
2. Human has tapetum lucidum in his eye to help him see at night. (   )
3. The energy stored in the battery is called chemical potential energy. (   )
4. When the speed of a body decreases, its kinetic energy increases. (   )
5. The nervous system works separately from the senses. (   )

## 4 Write the scientific term for each of the following sentences using the given words:

**(Friction - Kinetic energy - Energy - Adaptation - Response time)**

1. A distinctive feature of an organism that helps it to survive. (..................................)
2. The time taken by a body to receive information from the environment, and then processes it and responds to it. (..................................)
3. A force that arises between the surfaces of two bodies in contact and slows down their motion. (..................................)
4. The ability to do work. (..................................)
5. The energy possessed by the body due to its motion. (..................................)

## 5 Choose from column (B) what suits in column (A):

| (A) | (B) |
|---|---|
| 1. The visible form of energy that is transmitted in the form of waves is ............... energy. | ( ) Language. |
| 2. .................................. depends on sound bounce in locating the prey. | ( ) light. |
| 3. .................................. energy is stored in food. | ( ) unbalanced. |
| 4. When a rocket is launched and is able to leave the planet, because it is affected by .................................. forces. | ( ) Chemical. |
| 5. .................................. is a code in the form of sounds to convey information. | ( ) Bat. |

## Model (2)

### 1 Choose the correct answer:

1. The eyes narrow involuntarily to avoid sudden bright light, what are the two organs responsible for this?
   a. Nervous and muscular. b. Nervous and respiratory.
   c. Circulatory and muscular. d. Circulatory and respiratory.
2. Digestion of food begins in the mouth and ends in the .................................. .
   a. anus b. stomach c. small intestine d. large intestine
3. .................................. helps the human being to maintain the ecological system.
   a. eroding the soil b. planting trees
   c. cutting trees d. building new urban communities
4. Which of the following cases represents the transmission of a message from the sense organs to the nervous system?
   a. When you take your hands off a hot object.
   b. When you scream after hitting the table.
   c. When your finger bleeds after being injured.
   d. When your finger touches the spines of an aloe vera plant.
5. A boat moves a distance of 30 meters in a time of 10 seconds, so its speed is .............................. m/s.
   a. 3 b. 10 c. 30 d. 300
6. Which statement explains why you see your reflection when you look in the mirror?
   a. The light is refracted when it passes through the mirror.
   b. The light is reflected back from the mirror.
   c. The light is refracted and bounced off the mirror.
   d. The light is reflected when it passes through the mirror.
7. The class students play tug-of-war in the courtyard, and there are ten students on both sides of the rope, what indicates that none of them moved?
   a. One team has more energy than the other.
   b. One team has half the energy of the other team.
   c. Both sides have equal and opposite forces in direction.
   d. Both teams have unequal and opposite forces in direction.
8. You can determine the roughness of a sound by .................................. .
   a. pitch b. type of sound
   c. echo d. pattern and type of sound
9. Which of the following allows light to pass through?
   a. Wood. b. Glass. c. Metal. d. Wall.
10. Among the examples of behavioral adaptations that help an animal to protect itself from enemies are .................................. .
    a. extinction b. migration c. reproduction d. camouflage

## 2 Complete the following sentences using the given words:

**(chemical - thermal - exhalation - inhalation - kinetic - position - echo - friction)**

1. The dolphin can locate objects through echolocation by ........................ .
2. When objects fall downward, the energy stored in them is converted into........................ energy.
3. The diaphragm muscle contracts and moves down during the process of ........................ .
4. When you ride your bike, the ........................ energy which is stored in food inside your body is converted into kinetic energy.
5. The force that reduces the speed of a body and affects in the direction opposite to its motion is ........................ .

## 3 Put (✓) or (✗) in front of each of the following sentences:

1. Plants need long roots that extend deep into the soil to survive in the water scarcity environment. ( )
2. The number of breathing times decreases when doing activities and making effort. ( )
3. As the force acting on a body increases, the distance it moves increases. ( )
4. Some insects can communicate by sending flashes of light. ( )
5. We can see things around us as a result of refraction of light. ( )

## 4 Determine the type of adaptation whether "structural or "behavioral":

1. The buttress roots of some plants. (........................)
2. The beaks of some birds are sharp and strong to tear the flesh of prey. (........................)
3. Some animals hide in burrows to avoid the intense summer heat. (........................)
4. The presence of gills in fish to help them breathe in water. (........................)
5. Frogs hibernate to avoid the extreme drop in temperatures. (........................)

## 5 Give an example for each of the following:

1. Transparent material.

   ..................................................................................

2. Technological communication systems.

   ..................................................................................

3. A device that converts electric energy into light and heat energy.

   ..................................................................................

4. An animal has the ability to turn its head in all directions.

   ..................................................................................

5. Pushing force.

   ..................................................................................

## Model (3)

### 1 Choose the correct answer:

1. When gasoline is burned, the stored chemical energy is released in the form of .................... .

   a. smokes
   b. carbon dioxide gas
   c. spark
   d. heat

2. What kind of surfaces scatter the light randomly?

   a. Shiny.
   b. Rough.
   c. Smooth.
   d. Transparent.

3. The antelope that lives in the vast plains adapts by .................... .

   a. thick fur that helps to keep warm in winter
   b. long legs that help it to run quickly
   c. bright colors help him to attract the other sex
   d. a strong outer shell protects it

4. Humpback whales use singing for .................... .

   a. warming
   b. hiding from enemies
   c. mating and feeding
   d. having fun with whales

5. The organ that processes and interprets information similar to a computer is .................... .

   a. spinal cord
   b. skin
   c. brain
   d. nerves

6. The movement of a sailboat in the water by the action of the air is .................... force.

   a. pull
   b. push
   c. friction
   d. gravity

7. As the time taken to travel a certain distance increases, the speed of the body .................... .

   a. increases
   b. does not change
   c. decreases
   d. doubles

8. .................... is the sense that you use to identify the smell of a perfume.

   a. Taste
   b. Sight
   c. Smell
   d. Hearing

9. The juices of the liver and pancreas are poured into .................... .

   a. the stomach
   b. the small intestine
   c. the large intestine
   d. the mouth

10. The tapetum lucidum is one of the.................... adaptations that enable some animals to see in the dark.

    a. structural
    b. behavioral
    c. (a and b)
    d. no correct answer

## 2 Complete the following sentences using the given brackets:

1. The echo sound feature depends on the .................................... sense. (smelling – hearing)
2. The time taken to receive information from the environment and respond to it is called .................................... . (reaction time - speed time)
3. Electric wires transmit .................................... energy to homes and streets. (chemical - electric)
4. The force that causes the fruits to fall from the tree downwards is the .................................... . (pushing force - gravity)
5. Fish use .................................... to extract dissolved oxygen in the water. (lungs - gills)

## 3 Correct the underlined words:

1. Cows have sharp teeth suitable for eating grass. (....................................)
2. When the body reaches its maximum height, it stores maximum kinetic energy. (....................................)
3. The bowl-like face of an owl is an example of behavioral adaptation. (....................................)
4. Sound is the visual form of energy that is transmitted in the form of waves. (....................................)
5. When the body speed increases, its kinetic energy decreases. (....................................)

## 4 Choose from column (B) what suits in column (A):

| (A) | (B) |
|---|---|
| 1 When an unbalanced force is applied to a static body. | ( ) Diaphragm. |
| 2 When the wall opposes a moving car and stops it. | ( ) Nerves. |
| 3 Wood is an .................................... . | ( ) Opaque material. |
| 4 Carry messages from the brain and spinal cord to the rest of the body. | ( ) it starts to move. |
| 5 A large muscle that helps in the inhalation and exhalation processes. | ( ) it is a friction force. |

## 5 Determine the type of the energy in each of the following cases:

1. Energy stored in batteries. (....................................)
2. The energy produced when the electric heater is turned on. (....................................)
3. Energy stored in a ball at the top of a ramp. (....................................)
4. The energy of a player while running. (....................................)
5. The energy generated when the radio is turned on. (....................................)

## Model (4)

### 1 Choose the correct answer:

1. Which of the following is a source of light?

   a. The moon. b. The eyes. c. The fire. d. The mirror.

2. Ramy stopped suddenly while he was riding his bike because he heard the sound of a car speeding towards him. Which device received the external hearing signal that enabled Ramy to respond by stopping his bike?

   a. The circulatory system. b. The excretory system.

   c. The muscular system. d. The nervous system.

3. Fatima pushes a big box and Ezz comes to help her.

   How does this change the force and the distance moved by the box?

   a. It does not change the force or the distance.

   b. The force increases and distance decreases.

   c. The force and distance increase. d. Its force decreases, its distance increases.

4. The system responsible for digesting food and supplying the body with nutrients is .................. .

   a. respiratory b. digestive c. excretory d. nervous

5. Bats use their sense of .................. to reach their prey and avoid hitting objects

   a. sight b. smell c. hearing d. taste

6. Which of the following helps reptiles, such as the panther chameleon, to hide among the leaves of trees?

   a. Colored scales. b. Brown fur. c. Short legs. d. Golden fur.

7. The energy stored in a compressed spring is considered .................. energy.

   a. chemical b. kinetic c. potential d. electric

8. The unit that measures speed is .................. .

   a. seconds/meter b. hour/kilometer c. meter/second d. meter/kilometer

9. What happens to the kinetic energy when you clap your hands?

   a. It converts to sound and heat energy b.It converts to solar and potential energy

   c. Some of the energy is lost and some of it turns into sound energy

   d. Some energy is lost and some energy turns into chemical energy

10. .................. is one of the common ways of communication between humans and animals.

    a. Mobile phone b. Paintings c. Flashes d. Writing

## 2 Complete the following sentences using the given brackets:

1. The .................... in the mouth moistens the food to facilitate its digestion and swallowing. (tongue – teeth)
2. The.................... materials transmit light through them. (transparent – opaque)
3. The gravitational force is the force of ......... and its direction is always down towards the earth. (pull – push)
4. A car that travels 80 km in two hours is moving at a speed of .................... km / h. (40 – 20)
5. The alveoli in .................... are surrounded by a network of blood vessels through which gases are exchanged between blood and air. (trachea -two lungs)

## 3 write True or False:

1. When animals dig tunnels it is a form of structural adaptation. ( )
2. Meat-eaters animals have long digestive systems. ( )
3. The body's potential energy increases as it rises above the Earth's surface. ( )
4. Energy transformations don't occur when food is cooked. ( )
5. Objects move a great distance when pushed with great force. ( )

## 4 Write the scientific terms using the given words:

**(speed – potential energy - reflexes - communication system – structural adaptation)**

1. A change that occurs within the structure of the living organisms' bodies. (....................)
2. A group of devices work together to transfer information from one place to another. (....................)
3. The distance traveled per unit time. (....................)
4. The stored energy inside the body. (....................)
5. Messages that the nervous system sends quickly and you cannot control them. (....................)

## 5 Choose from column (B) the sensory information that suits each sense organ in column (A):

| (A) | (B) |
|---|---|
| 1 The hand | ( ) Light coming from an open window. |
| 2 The eyes | ( ) The bad smell. |
| 3 The tongue | ( ) Heat from a hot stove. |
| 4 The ears | ( ) Sour lemon taste. |
| 5 The nose | ( ) Noise coming from the car loudspeaker. |

## Model (5)

### 1 Choose the correct answer:

1. What is the energy transformation when riding a bike?
   a. Thermal energy converts into potential energy.
   b. Chemical energy converts into kinetic energy.
   c. Solar energy converts into chemical energy.
   d. Kinetic energy converts into nuclear energy.

2. Which of the following can store energy?
   a. Battery. b. Wire. c. Plastic. d. electric lamp.

3. What is the necessary mathematical relationship to calculate the velocity?
   a. distance ÷ time b. time ÷ distance c. mass ÷ time d. time ÷ mass

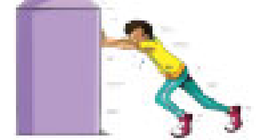
4. The .................... leaves help plants absorb sunlight.
   a. small b. broad c. triangular d. spiny

5. The diaphragm muscle contracts and moves downwards during the .................... process.
   a. inhalation b. exhalation c. digestion d. feeding

6. Table salt can be distinguished from sugar by the sense of .................... .
   a. sight b. smell c. hearing d. taste

7. Which of the following allows light to pass through it?
   a. Wood. b. Glass. c. Metal. d. Wall.

8. The opposite figure represents .................... force.
   a. pushing b. pulling
   c. gravity d. friction



9. Each of the following represents kinetic energy except .................... .
   a. vibration of particles of the substance during heating
   b. the movement of sound or light waves in the air
   c. the movement of electrons inside a wire
   d. a ball stuck to the top of a tree

10. Bees depend in communication on .................... .
    a. light b. sound c. smell d. movement

## 2 Complete the following sentences using the given brackets:

1. The velocity of a body increases when the time taken to cover a certain distance .................... .
(increases - decreases)
2. The main source of light on the Earth's surface is the .................... . (sun – fire)
3. The blood transports .................... from the lungs to all the cells of the body.
(oxygen gas - carbon dioxide gas )
4. The amount of energy required to move a body through the force acting on it is known as .................... . (work - force)
5. When you knock on the door, the .................... energy changes into .................... energy.
(kinetic - sound / kinetic - potential)

## 3 Correct the underlined words:

1. The <u>spinal cord</u> is the main control center in the human body. (....................)
2. Fish breathe the dissolved oxygen in water through the <u>skin</u>. (....................)
3. One of the negative effects of <u>water</u> pollution on humans is chest disease. (....................)
4. A ball that rolls on a ramp gradually its <u>potential</u> energy increases as it falls. (....................)
5. When <u>balanced</u> forces act on a static body, it moves. (....................)

## 4 Choose from column (B) what suits in column (A):

| (A) | (B) |
|---|---|
| 1 A pattern has meaning | ( ) The friction force |
| 2 A force arises between two touching surfaces. | ( ) Its speed increases |
| 3 The light property helps us to see our image in mirror | ( ) Chemical energy |
| 4 The stored energy in gasoline | ( ) Light reflection |
| 5 When the applied force on object increases , .................... | ( ) The code |

## 5 Classify the following into (structural or behavioral) adaptation:

1. The presence of sharp thorns in some desert plants. (....................)
2. The varied diet property in some animals. (....................)
3. The activity of bats at night to search for food. (....................)
4. Sharp teeth in predators. (....................)
5. The eyes of the panther chameleon move in different directions. (....................)

## Model answer (1)

### 1 Choose the correct answer:

1. The leaves of most desert plants are .................................. .

   a. are large and broad
   b. are small and have thorns
   c. broad and have thorns
   d. lose water easily

2. Which of the following examples of movement cannot be observed?

   a. A train moving on rails.
   b. The movement of the moon around Earth.
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4. The organ which is responsible for the sense of sight is the .................................. .

   a. ear
   b. eye
   c. nose
   d. skin

5. Which of these materials reflects light better?

   a. Wood.
   b. Mirror.
   c. Plastic.
   d. Cardboard.

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   a. The attraction of the Earth to an object.
   b. Pushing a box to move it.
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7. The energy produced when the electric heater is turned on is the .................................. energy.

   a. electrical
   b. sound
   c. thermal
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8. Fish breathe the dissolved oxygen in water through.................................. .

   a. skin
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   c. gills
   d. stomach

9. To calculate the velocity of a body, we need to know.................................. .

   a. distance only
   b. time only
   c. energy and time
   d. distance and time

10. What are the two organs that represent the central nervous system?

    a. Cerebellum and the vertebral column.
    b. Spinal cord and the brain.
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## 2 Complete the following sentences using the given words:

**(respiratory – balanced - digestive - movements - structural - behavioral - 4 - 100 - unbalanced)**

1. Bees are similar to humans in communicating through movements .
2. A body that travels a distance of 20 meters in 5 seconds, so its speed is 4 m/s.
3. When unbalanced forces act on a static body, it will move.
4. Migration of birds to warm places is an example of behavioral adaptation.
5. The system that digests food and obtains nutrients is digestive system.

## 3 Put (✓) or (✗) in front of each of the following sentences:

1. Communication between ants is through their sense of smell. (✓)
2. Human has tapetum lucidum in his eye to help him see at night. (✗)
3. The energy stored in the battery is called chemical potential energy. (✓)
4. When the speed of a body decreases, its kinetic energy increases. (✗)
5. The nervous system works separately from the senses. (✗)

## 4 Write the scientific term for each of the following sentences using the given words:

**(Friction - Kinetic energy - Energy - Adaptation - Response time)**

1. A distinctive feature of an organism that helps it to survive. (Adaptation)
2. The time taken by a body to receive information from the environment, and then processes it and responds to it. (Response time)
3. A force that arises between the surfaces of two bodies in contact and slows down their motion. (Friction)
4. The ability to do work. (Energy)
5. The energy possessed by the body due to its motion. (Kinetic energy)

## 5 Choose from column (B) what suits in column (A):

| (A) | (B) |
|---|---|
| 1 The visible form of energy that is transmitted in the form of waves is ........ energy. | (5) Language. |
| 2 ........................ depends on sound bounce in locating the prey. | (1) light. |
| 3 ........................ energy is stored in food. | (4) unbalanced. |
| 4 When a rocket is launched and is able to leave the planet, because it is affected by ........................ forces. | (3) Chemical. |
| 5 ........................ is a code in the form of sounds to convey information. | (2) Bat. |

## Model answer (2)

### 1 Choose the correct answer:

1. The eyes narrow involuntarily to avoid sudden bright light, what are the two organs responsible for this?
   a. Nervous and muscular
   b. Nervous and respiratory
   c. Circulatory and muscular
   d. Circulatory and respiratory
2. Digestion of food begins in the mouth and ends in the .................... .
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   c. small intestine
   d. large intestine
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   b. planting trees
   c. cutting trees
   d. building new urban communities
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5. A boat moves a distance of 30 meters in a time of 10 seconds, so its speed is .................... m/s.
   a. 3
   b. 10
   c. 30
   d. 300
6. Which statement explains why you see your reflection when you look in the mirror?
   a. The light is refracted when it passes through the mirror.
   b. The light is reflected back from the mirror.
   c. The light is refracted and bounced off the mirror.
   d. The light is reflected when it passes through the mirror.
7. The class students play tug-of-war in the courtyard, and there are ten students on both sides of the rope, what indicates that none of them moved?
   a. One team has more energy than the other.
   b. One team has half the energy of the other team.
   c. Both sides have equal and opposite forces in direction.
   d. Both teams have unequal and opposite forces in direction.
8. You can determine the roughness of a sound by .................... .
   a. pitch
   b. type of sound
   c. echo
   d. pattern and type of sound
9. Which of the following allows light to pass through it?
   a. Wood.
   b. Glass.
   c. Metal.
   d. Wall.
10. Among the examples of behavioral adaptations that help an animal to protect itself from enemies are .................... .
    a. extinction
    b. migration
    c. reproduction
    d. camouflage

## 2 Complete the following sentences using the given words:

**(chemical - thermal - exhalation - inhalation - kinetic - position - echo - friction)**

1. The dolphin can locate objects through echolocation by echo.
2. When objects fall downward, the energy stored in them is converted into kinetic energy.
3. The diaphragm muscle contracts and moves down during the process of inhalation .
4. When you ride your bike, the chemical energy which is stored in food inside your body is converted into kinetic energy.
5. The force that reduces the speed of a body and affects in the direction opposite to its motion is friction.

## 3 Put (✓) or (✗) in front of each of the following sentences:

1. Plants need long roots that extend deep into the soil to survive in the water scarcity environment. (✓)
2. The number of breathing times decreases when doing activities and making effort. (✗)
3. As the force acting on a body increases, the distance it moves increases. (✓)
4. Some insects can communicate by sending flashes of light. (✓)
5. We can see things around us as a result of refraction of light. (✗)

## 4 Determine the type of adaptation whether "structural or "behavioral":

1. The buttress roots of some plants. (Structural adaptation)
2. The beaks of some birds are sharp and strong to tear the flesh of prey. (Structural adaptation)
3. Some animals hide in burrows to avoid the intense summer heat. (Behavioral adaptation)
4. The presence of gills in fish to help them breathe in water. (Structural adaptation)
5. Frogs hibernate to avoid the extreme drop in temperatures. (Behavioral adaptation)

## 5 Give an example for each of the following:

1. Transparent material.

   Glass
2. Technological communication systems.

   Cell phone
3. A device that converts electric energy into light and heat energy.

   Electric light bulb
4. An animal has the ability to turn its head in all directions.

   Owl
5. Pushing force.

   Kicking a ball

## Model answer (3)

### 1 Choose the correct answer:

1. When gasoline is burned, the stored chemical energy is released in the form of ............ .

   a. smokes  b. carbon dioxide gas
   c. spark  d. heat

2. What kind of surfaces scatter the light randomly?

   a. Shiny  b. Rough  c. Smooth  d. Transparent.

3. The antelope that lives in the vast plains adapts by ............ .

   a. thick fur that helps to keep warm in winter
   b. long legs that help it to run quickly
   c. bright colors help him to attract the other sex
   d. a strong outer shell protects it

4. Humpback whales use singing for ............ .

   a. warming  b. hiding from enemies
   c. mating and feeding  d. having fun with whales

5. The organ that processes and interprets information similar to a computer is ............ .

   a. spinal cord  b. skin  c. brain  d. nerves

6. The movement of a sailboat in the water by the action of the air is ............ . force.

   a. pull  b. push  c. friction  d. gravity

7. As the time taken to travel a certain distance increases, the speed of the body ............ .

   a. increases  b. does not change  c. decreases  d. doubles

8. ............ is the sense that you use to identify the smell of a perfume.

   a. Taste  b. Sight  c. Smell  d. Hearing

9. The juices of the liver and pancreas are poured into ............ .

   a. the stomach  b. the small intestine
   c. the large intestine  d. the mouth

10. The tapetum lucidum is one of the............ adaptations that enable some animals to see in the dark.

    a. structural  b. behavioral  c. (a and b)  d. no correct answer

## 2 Complete the following sentences using the given brackets:

1. The echo sound feature depends on the .................................. sense. (smelling – hearing)
2. The time taken to receive information from the environment and respond to it is called .................................. . (reaction time - speed time)
3. Electric wires transmit .................................. energy to homes and streets. (chemical - electric)
4. The force that causes the fruits to fall from the tree downwards is the .................................. . (pushing force - gravity)
5. Fish use .................................. to extract dissolved oxygen in the water. (lungs - gills)

## 3 Correct the underlined words:

1. Cows have sharp teeth suitable for eating grass. (flat)
2. When the body reaches its maximum height, it stores maximum kinetic energy. (potential energy)
3. The bowl-like face of an owl is an example of behavioral adaptation. (structural)
4. Sound is the visual form of energy that is transmitted in the form of waves. (light)
5. When the body speed increases, its kinetic energy decreases. (increases)

## 4 Choose from column (B) what suits in column (A):

| (A) | (B) |
|---|---|
| 1. When an unbalanced force is applied to a static body. | (5) Diaphragm. |
| 2. When the wall opposes a moving car and stops it. | (4) Nerves. |
| 3. Wood is an .................................. . | (3) Opaque material. |
| 4. Carry messages from the brain and spinal cord to the rest of the body. | (1) it starts to move. |
| 5. A large muscle that helps in the inhalation and exhalation processes. | (2) it is a friction force. |

## 5 Determine the type of the energy in each of the following cases:

1. Energy stored in batteries. (chemical energy)
2. The energy produced when the electric heater is turned on. (heat energy)
3. Energy stored in a ball at the top of a ramp. (potential energy)
4. The energy of a player while running. (kinetic energy)
5. The energy generated when the radio is turned on. (Sound energy)

## Model answer (4)

### 1 Choose the correct answer:

1. Which of the following is a source of light?

   a. The moon. b. The eyes. c. The fire. d. The mirror.

2. Ramy stopped suddenly while he was riding his bike because he heard the sound of a car speeding towards him. Which device received the external hearing signal that enabled Ramy to respond by stopping his bike?

   a. The circulatory system. b. The excretory system.

   c. The muscular system. d. The nervous system.

3. Fatima pushes a big box and Ezz comes to help her.

   How does this change the force and the distance moved by the box?

   a. It does not change the force or the distance.

   b. The force increases and distance decreases.

   c. The force and distance increase. d. its force decreases, its distance increases.

4. The system responsible for digesting food and supplying the body with nutrients is .................. .

   a. respiratory b. digestive c. excretory d. nervous

5. Bats use their sense of .................. to reach their prey and avoid hitting objects

   a. sight b. smell c. hearing d. taste

6. Which of the following helps reptiles, such as the panther chameleon, to hide among the leaves of trees?

   a. Colored scales. b. Brown fur. c. Short legs. d. Golden fur.

7. The energy stored in a compressed spring is considered .................. energy.

   a. chemical b. kinetic c. potential d. electric

8. The unit that measures speed is .................. .

   a. seconds/meter b. hour/kilometer c. meter/second d. meter/kilometer

9. What happens to the kinetic energy when you clap your hands?

   a. It converts to sound and heat energy b. It converts to solar and potential energy

   c. Some of the energy is lost and some of it turns into sound energy

   d. Some energy is lost and some energy turns into chemical energy

10. .................. is one of the common ways of communication between humans and animals.

    a. Mobile phone b. Paintings c. Flashes d. Writing

## 2 Complete the following sentences using the given brackets:

1. The .................... in the mouth moistens the food to facilitate its digestion and swallowing. (tongue – teeth)
2. The.................... materials transmit light through them. (transparent – opaque)
3. The gravitational force is the force of ........ and its direction is always down towards the earth. (pull – push)
4. A car that travels 80 km in two hours is moving at a speed of .................... km / h. (40 – 20)
5. The alveoli in .................... are surrounded by a network of blood vessels through which gases are exchanged between blood and air. (trachea -two lungs)

## 3 write True or False:

1. When animals dig tunnels it is a form of structural adaptation. (False)
2. Meat-eaters animals have long digestive systems. (false)
3. The body's potential energy increases as it rises above the Earth's surface. (True)
4. Energy transformations don't occur when food is cooked. (False)
5. Objects move a great distance when pushed with great force. (True)

## 4 Write the scientific terms using the given words:

**(speed – potential energy - reflexes - communication system – structural adaptation)**

1. A change that occurs within the structure of the living organisms' bodies. (Structural adaptation)
2. A group of devices work together to transfer information from one place to another. (Communication system)
3. The distance traveled per unit time. (Speed)
4. The stored energy inside the body. (potential energy)
5. Messages that the nervous system sends quickly and you cannot control them. (Reflexes)

## 5 Choose from column (B) the sensory information that suits each sense organ in column (A):

| (A) | (B) |
|---|---|
| 1 The hand | (2) Light coming from an open window. |
| 2 The eyes | (5) The bad smell. |
| 3 The tongue | (1) Heat from a hot stove. |
| 4 The ears | (3) Sour lemon taste. |
| 5 The nose | (4) Noise coming from the car loudspeaker. |

## Model answer (5)

### 1 Choose the correct answer:

1. What is the energy transformation when riding a bike?
   - a. Thermal energy converts into potential energy.
   - b. Chemical energy converts into kinetic energy.
   - c. Solar energy converts into chemical energy.
   - d. Kinetic energy converts into nuclear energy.

2. Which of the following can store energy?
   - a. Battery. b. Wire. c. Plastic. d. electric lamp.

3. What is the necessary mathematical relationship to calculate the velocity?
   - a. distance ÷ time b. time ÷ distance c. mass ÷ time d. time ÷ mass

4. The .................... leaves help plants absorb sunlight.
   - a. small b. broad c. triangular d. spiny

5. The diaphragm muscle contracts and moves downwards during the .................... process.
   - a. inhalation b. exhalation c. digestion d. feeding

6. Table salt can be distinguished from sugar by the sense of .................... .
   - a. sight b. smell c. hearing d. taste

7. Which of the following allows light to pass through it?
   - a. Wood. b. Glass. c. Metal. d. Wall.

8. The opposite figure represents .................... force.
   - a. pushing b. pulling
   - c. gravity d. friction



9. Each of the following represents kinetic energy except .................... .
   - a. vibration of particles of the substance during heating
   - b. the movement of sound or light waves in the air
   - c. the movement of electrons inside a wire
   - d. a ball stuck to the top of a tree

10. Bees depend in communication on .................... .
    - a. light b. sound c. smell d. movement

## 2 Complete the following sentences using the given brackets:

1. The velocity of a body increases when the time taken to cover a certain distance ........................ . (increases - decreases)
2. The main source of light on the Earth's surface is the ........................ . (sun – fire)
3. The blood transports ........................ from the lungs to all the cells of the body. (oxygen gas - carbon dioxide gas )
4. The amount of energy required to move a body through the force acting on it is known as ........................ . (work - force)
5. When you knock on the door, the ........................ energy changes into ........................ energy. (kinetic - sound / kinetic - potential)

## 3 Correct the underlined words:

1. The spinal cord is the main control center in the human body. (brain)
2. Fish breathe the dissolved oxygen in water through the skin. (gills)
3. One of the negative effects of water pollution on humans is chest disease. (air)
4. A ball that rolls on a ramp gradually its potential energy increases as it falls. (kinetic)
5. When balanced forces act on a static body, it moves. (unbalanced)

## 4 Choose from column (B) what suits in column (A):

| (A) | (B) |
|---|---|
| 1. A pattern has meaning | (2) The friction force |
| 2. A force arises between two touching surfaces. | (5) Its speed increases |
| 3. The light property helps us to see our image in mirror | (4) Chemical energy |
| 4. The stored energy in gasoline | (3) Light reflection |
| 5. When the applied force on object increases , ........................ | (1) The code |

## 5 Classify the following into (structural or behavioral) adaptation:

1. The presence of sharp thorns in some desert plants. (structural adaptation)
2. The varied diet property in some animals. (behavioral adaptation)
3. The activity of bats at night to search for food. (behavioral adaptation)
4. Sharp teeth in predators. (structural adaptation)
5. The eyes of the panther chameleon move in different directions. (structural adaptation)

# First Semester Exams

## Exam (1)

**1** A) Choose the correct answer from the brackets:

1. The change in the position of a body from one place to another with the passage of time is .......................... .

(energy - force - motion - gravity)

2. The bat sleeps in a/an .......................... position.

(upright - upside down - inclined - flying)

3. The speed of a toy car that travels 10 meters in two seconds is .......................... the speed of the toy car that travels 20 meters in 5 seconds.

(less than - greater than - equal to - none of the previous)

4. From the examples of transparent objects is/are .......................... .

(water - air - glass - all the previous)

B) What is meant by...?

1. Satellite.

2. Countershading.

**Answers 1:**

A) 1. motion 2. upside down
3. greater than 4. all the previous

B) 1. Satellite: an artificial or natural object that revolves around another object in space.
2. Countershading: using the camouflage strategy by the bull shark to sneak up on preys.

## 2 A) Complete the following:

1. We can stop the car by the ........................ because of the force of ........................ .
2. The supporting roots in kapok trees are ........................ adaptation.
3. The head of the cheetah is bent towards its shoulder, making it reduce the ........................ .
4. The leg of the Egyptian jerboa is similar to the leg of a ........................ so it can jump.

### B) What happens in the following cases...?

1. When two cars are moving at the same speed and in the same direction.
2. When the ear hears the sound of a bird.

---

## 3 A) Put a (✓) in front of the correct statement and a (✗) in front of the wrong statement:

1. The balanced forces acting on a body change its state.
2. Sensory receptors perceive the influences of the external environment.
3. The kinetic energy is directly proportional to the square of the car's speed.
4. Ants communicate with their peers using sound.

**Answers 2:**

A) 1. brakes, friction    2. structural    3. air resistance    4. kangaroo

B) 1. They both seem at rest to each other.

2. The ear receives the sound wave and then sends a message to the brain to perceive the sound and then it sends a signal to the body to know what to do.

**Answers 3:**

A) 1. ✗    2. ✗    3. ✓    4. ✗

## B) State the scientific reason for each of the following:

1. One of the two teams won the tug-of-war game.
2. Arctic fox has thick fur.

---

## 4 A) Correct the underlined words in the following statements:

1. One of the advantages of a solar car is its need for fuel.
2. Under the skin of the polar bear there is a layer of protein that warms its body.
3. Pulling a moving car with a rope to another stationary car is an example of stopping by pushing.
4. The light energy is transmitted in the air in the form of successive batches.

## B) Mention the importance of:

1. Balanced and unbalanced forces.
2. The sense of hearing in the jerboa.

**Answers 3:**

B) 1. Because the forces acting on the rope are unbalanced.
   2. To protect it from the extreme cold.

**Answers 4:**

A) 1. no need — 2. fats
   3. movement — 4. waves

B) 1. When we want to keep the body at rest, we use balanced forces on it.
   When we want to make the body move, we use unbalanced forces on it.
   2. Receiving sounds produced from snakes to be able to escape.

# Exam (2)

## 1 A) Choose the correct answer from the brackets:

1. The tarsier monkey can see clearly in the dark because it .......................... .

(has no tail - has 2 big eyes - can rotate its head by 180 degrees - the 2 last choices)

2. If the mass of a body doubles and its speed doubles, then its kinetic energy increases to .......................... .

(the double - three times - four times - none of the previous answers)

3. The bat depends on .......................... to locate the prey.

(vision - echo - touch - smell)

4. The ability to do work is .......................... .

(motion - gravity - force - energy)

## B) What is meant by...?

1. Neural message.
2. Cheetah.

**Answers 1:**

A) 1. 2 big eyes — 2. none of the previous answers
3. echo — 4. energy

B) 1. Neural message: is a nerve impulse that travels rapidly through the nervous system through the nerves.
2. Cheetah: is a predatory animal whose speed is greater than the speed of humans, and it is the fastest land animal on the Earth surface.

## 2 A) Complete the following:

1. The nervous system of mammals consists of the brain, .......................... and .......................... .
2. A body changes its state when the forces are .......................... .
3. By increasing the pressure on the gas pedal of a moving car, .......................... increases.
4. Light reflection has two types: .............................. reflection and .............................. reflection.

### B) What happens in the following cases...?

1. When plants and animals are buried underground for a long time.
2. If the leaves of acacia trees do not secrete poisons.

---

## 3 A) Put a (✓) in front of the correct statement and a (✗) in front of the wrong statement:

1. The length and strength of the roots of mangroves is a structural adaptation.
2. Owls' ears amplify the sounds.
3. Fast driving is dangerous.
4. The lower the energy, the faster the body and the higher its kinetic energy.

**Answers 2:**
A) 1. spinal cord, nerves 2. unbalanced 3. speed 4. regular, irregular
B) 1. Petroleum is formed.
2. The herbivorous animals feed on it.

**Answers 3:**
A) 1. ✓ 2. ✓ 3. ✓ 4. ✗

### B) State the scientific reason for each of the following:

1. A snake can hunt in the dark despite not seeing well.

---

### 4 A) Correct the underlined words in the following statements:

1. Objects on inclined surfaces move at lower speeds.
2. The response time of the jerboa occurs in less than a fraction of an hour.
3. Energy can be seen.
4. The cornea in the human eye focuses light onto the retina.

### B) Mention the importance of:

1. The solar car.
2. Rotation of the owl's head in all directions.

**Answers 3:**

B) 1. Because it depends on feeling the heat of the prey through a part in its face.

**Answers 4:**

A) 1. higher 2. a second
3. cannot 4. lens

B) 1. It operates without energy consumption and does not require fuel or charging.
2. To identify small and far movements and search for preys.

# Exam (3)

## 1 A) Choose the correct answer from the brackets:

1. When the angle of inclination of the surface on which a ball is moving decreases, the speed of the ball .......................... .

   (decreases - increases - remains constant - increases by a small amount)

2. The fennec fox has large ears that work on .......................... .

   (cooling its body down - increasing its sense of hearing - protecting it from the sun - the first and second choices)

3. Ants communicate with their species through .......................... .

   (taste - vision - hearing - smell)

4. The main types of force are .......................... forces.

   (pull and push - pull and pull - light and strong - visible and tangible)

## B) What is meant by...?

1. Response time.
2. Work.

**Answers 1:**

A) 1. decreases 2. the first and second choices
3. smell 4. pull and push

B) 1. Response time: is the time period from the moment the stimulus is received until it is perceived by the brain and the appropriate response is given.
2. Work: a force acting on an object to move it a certain distance.

## 2 A) Complete the following:

1. The kinetic energy transferred during a collision increases with the increase in the ......................... .
2. Vision defects can be treated by wearing ......................... or ......................... surgery.
3. Potential energy increases as the height of the body ......................... above the Earth's surface.
4. A blind cane transforms the echoed sound waves into ......................... .

### B) What happens in the following cases...?

1. When the car is running.
2. When ant soldiers release a strong smell.

---

## 3 A) Put a (✓) in front of the correct statement and a (✗) in front of the wrong statement:

1. The eye sends a signal to the brain when seeing to interpret information.
2. Sound energy is a type of kinetic energy.
3. Bats live in caves where there is light.
4. The body may be at rest and then move due to unbalanced forces.

**Answers 2:**

A) 1. speed
2. medical glasses, laser
3. increases
4. vibrations

B) 1. We get kinetic energy in the form of mechanical, sound and thermal energy.
2. To alert the scout ants when there is a shortage of food.

**Answers 3:**

A) 1. ✓ 2. ✓ 3. ✗ 4. ✓

**B) State the scientific reason for each of the following:**

1. The difference in the speed of the ball on an inclined plane despite the fact that the plane or its angle of inclination did not change with good control of the stopwatch.
2. The glow of the eyes of the cat fish at night.

---

**4 A) Correct the underlined words in the following statements:**

1. The satellite continues to rotate at the same speed in its orbit because the force acting on it is balanced.
2. The idea of the car brakes depends on increasing the power of gasoline when you press it.
3. Agama lizard and tiger chameleon lizard are cold-blooded rodents.
4. There is a certain part in the tail of the snake that can sense heat.

**B) Mention the importance of:**

1. The steering wheel of the car.
2. The roots of the mangrove trees.

**Answers 3:**

B) 1. Because of the ball pulling.
2. Because there is a transparent membrane behind the retina called the Tapetum Lucidum, it reflects light that is not detected by the retina.

**Answers 4:**

A) 1. vanished 2. friction
3. reptiles 4. face

B) 1. The steering wheel changes the direction of the car.
2. To help the plant to adapt with the water waves.

# Exam (4)

## 1 A) Choose the correct answer from the brackets:

1. Energy can be described by all of the following, except that it can be .......................... .

(stored - transformed - felt - seen)

2. One of the most important reasons for the disappearance of the Sinai lizards from their habitat is .......................... .

(the availability of food - the abundance of water - the habitat destruction - providing shelter)

3. From the sensory receptors in humans is/are .......................... .

(ears and nose - vision and hearing - eyes and nose - first and third choices)

## B) What is meant by...?

1. Potential energy.
2. Opaque objects.

**Answers 1:**

A) 1. seen

2. the habitat destruction

3. first and third choices

B) 1. Potential energy: is a type of energy stored in the body.

2. Opaque objects: they are objects that do not allow light to pass through them, so it forms a shadow.

## 2 A) Complete the following:

1. .......................... provides the car with the required energy.
2. The human body gets the .......................... necessary for the work of the body systems.
3. The bee dances one dance if the flower is .........................., while it dances three or more dances if the flower is .......................... .

### B) What happens in the following cases...?

1. When the body absorbs the light that falls on it completely.
2. When a soccer ball is kicked.

---

## 3 A) Put a (✓) in front of the correct statement and a (✗) in front of the wrong statement:

1. Amphibians, such as frogs, live in moist environments.
2. The energy of a child sitting on a slide is converted into kinetic energy when he slides on it.
3. The pupil of the nocturnal animal is narrow to enable it to see well in the dark.

**Answers 2:**

A) 1. Fuel 2. energy
3. near, far away

B) 1. A shadow is formed and then the body will not be seen.
2. Its speed, direction, or both change.

**Answers 3:**

A) 1. ✓ 2. ✓ 3. ✗

## B) State the scientific reason for each of the following:

1. The kinetic energy is called "energy of motion".
2. The wings of the firefly can light up.

## 4 A) Correct the underlined words in the following statements:

1. The energy stored in any body is kinetic energy.
2. When the speed of an object doubles, its kinetic energy doubles.
3. Sinai agama lizards feed mainly on small reptiles.
4. Humpback whales produce random sounds to communicate with each other.

## B) Mention the importance of:

1. The inclined surface.
2. The dog's teeth.

**Answers 3:**

B) 1. Because it is an energy that is gained as a result of body motion.
2. Due to the occurrence of a group of chemical reactions inside its body.

**Answers 4:**

A) 1. potential  2. increases to its four times
3. insects  4. range of notes

B) 1. Changing the energy of an object moving on it by changing its angle of inclination.
2. They are sharp enough to shred meat.

# El-Moasser Final Examinations

## Model Exam 1

**1 (A) Choose the correct answer :**

1. The roots of kapok tree don't grow deeply in the soil, because ..............
   a. the soil contains less water. b. the soil contains more water.
   c. the climate is very cold. d. the climate is very hot.
2. The system responsible for moving your hand away from danger, such as touching a hot cup of tea, is the .............. system.
   a. digestive b. respiratory c. nervous d. stomach
3. Songs of humpback whales in winter are characterized by each of the following except ..............
   a. it is for mating season. b. moving better through cold water.
   c. having soft sounds. d. having low-pitched sounds.
4. When you move something toward you, this represents ..............
   a. pushing force. b. light energy. c. pulling force. d. sound energy.

**(B) Give a reason for the following**

Seatbelts in cars are very important.

..........................................................................................................

..........................................................................................................

**2 (A) Put (✓) or (✗) :**

1. Digestion process begins in stomach with the help of saliva. ( )
2. Some animals have extra abilities that humans do not have, and these extra abilities are called super sensory adaptations. ( )
3. Cats have excellent night vision, while snakes and bats are not. ( )
4. The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec. ( )

**(B) What happens to ... ?**

The kinetic energy of a moving car if its speed increases.

..........................................................................................................

..........................................................................................................

**3 (A) Complete the following sentences :**

1. As the pollution rate of water in ponds and air increases, the number of amphibians ..............
2. The .............. is the organ that sends information to the brain when you smell the odor of a perfume.

3. To increase the speed of a moving car, we need to .............. the force that acts on it.
4. When a moving car hits a tree, a part of .............. energy of the car changes into a .............. energy that you can hear.

**(B) Classify the following actions in the table below according to the needed force :**

1. Typing on a keyboard.
2. Lifting a bag.
3. Moving a chair away from you.
4. Kicking a football.
5. Closing the door from inside a room.
6. Opening the door of a refregirator.

| Pulling force | Pushing force |
|---|---|
| .............................. | .............................. |
| .............................. | .............................. |
| .............................. | .............................. |
| .............................. | .............................. |
| .............................. | .............................. |

**4 (A) Write the scientific term of each of the following :**

1. The part of the kapok tree which is supported by the buttress roots. (........................)
2. It delivers messages between the spinal cord and different body organs. (........................)
3. It is the force that is exerted when objects rub against each other. (........................)
4. One of the measuring units of time. (........................)

**(B) Find the speed of a runner, if you know that he covers 300 meters in 30 seconds.**

..........................................................................................

..........................................................................................

## Model Exam 2

**1 (A) Complete the following sentences :**

1. Engineers use .............. to slow down the motion of the shockwave truck.
2. The speed affects the .............. energy of a moving object.
3. In the electric bell, .............. energy changes into .............. energy.

4. Most animals can hunt when .............. energy bounces off a prey into their eyes, while bats can hunt when .............. energy bounces off a prey into their ears.

**(B) Give a reason for the following :**

When your friend catches a ball that is thrown in the air, the movement of the ball is stopped.

.......................................................................................................................................

.......................................................................................................................................

**2 (A) Choose the correct answer :**

1. Displaying light is a type of communication that is found in ..............
   a. plants only.
   b. plants and humans.
   c. animals and humans.
   d. animals only.
2. The speed of a toy car moves down a ramp increases by increasing its .............., but its speed decreases by increasing the ..............
   a. friction force – mass.
   b. mass – friction force.
   c. temperature – mass.
   d. mass – temperature.
3. Human can help restoring ecosystem by all of the following activities, except ..............
   a. replanting the cleared forests.
   b. removing air and water pollutants.
   c. producing more factories exhausts.
   d. preserving existed plants and animals.
4. When a car moves up a hill, this happens due to the effect of ..............
   a. gravity force. b. balanced force. c. sound energy. d. kinetic energy.

**(B) What happens if ... ?**

Light falls on a mirror that has few cracks.

.......................................................................................................................................

.......................................................................................................................................

**3 (A) Correct the underlined words :**

1. Both factories exhausts and floods produce smog, that causes air pollution. (........................)
2. The energy that is produced due to the friction between the string and other parts of Newton's cradle, is the sound energy. (........................)
3. Hearing is one of the weak senses of jerboa. (........................)

4. The friction between the car's windows and the road decreases the speed of the car. (..........................)

**(B) Classify the following materials into opaque objects and transparent objects :**

"Wood – Air – Water – Metal – Lenses"

| Opaque objects | Transparent objects |
|---|---|
| .............................. | .............................. |
| .............................. | .............................. |
| .............................. | .............................. |
| .............................. | .............................. |

**4 (A) Write the scientific term of each of the following :**

1. A group of ants which is responsible for sending smelly messages when there is a shortage of food. (..........................)
2. It is the force that pulls objects toward the center of the Earth. (..........................)
3. A structural adaptation that prevents the loss of water in the pine tree. (..........................)
4. The organ used to differentiate between different scents. (..........................)

**(B) A truck travels a distance of 160 kilometers in 2 hours. Find its speed.**

..............................................................................................

..............................................................................................

## Model Exam 3

**1 (A) Choose the correct answer :**

1. Which of the following sentences describes the friction force ? ..............
   a. It pulls objects toward the ground.
   b. It pushes objects away from the ground.
   c. It slows down or stops the moving objects.
   d. It doesn't affect the moving objects.
2. In penguin's body, the insulating layer of fat and dense feathers trap .............. against the skin.
   a. cold air   b. cold water   c. warm water   d. warm air

3. The energy that is stored in an object due to its position, is known as ..............
   a. kinetic energy.
   b. potential energy.
   c. electrical energy.
   d. chemical energy.
4. When you see a car coming towards you, the sensory receptors .............. to get away from it.
   a. in the ears send a signal to the brain first
   b. in the eyes send a signal to the brain first
   c. in the eyes send a signal to sensory receptors in the ears
   d. in the ears send a signal to sensory receptors in the eyes

**(B) Give a reason for the following :**

Mirror can reflect the light better than a painted surface.

..........................................................................................

---

**2 (A) Put (✓) or (✗) :**

1. The kinetic energy of a toy car pushed on a flat surface is equal to the kinetic energy of another toy car pushed with the same force down a ramp. (   )
2. The main difference between pulling and pushing forces is the direction of the force. (   )
3. Sharp spines are adaptation of different plants to prevent animals from eating them. (   )
4. As the height of an object from the Earth's surface increases, its potential energy increases. (   )

**(B) Find the speed of a car that moves a distance of 240 Kilometers in 3 hours.**

..........................................................................................

..........................................................................................

---

**3 (A) Write the scientific term of each of the following :**

1. They include the eyes, nose, ears, tongue and skin, and they receive information from the surroundings and send it to the brain. (.......................)
2. They are present in car airbags, and allow them to deflate fast after collision. (.......................)
3. A type of surface that reflects light in different directions when the light falls on it. (.......................)
4. A large muscle that contracts during breathing in and relaxes during breathing out. (.......................)

**(B) Classify the following living organisms according to their habitats into organisms live in deserts and organisms live in forests in the table below :**

(Starred agama lizard – Panther chameleon – Fennec fox – Kapok tree – Palm tree – Barbary fig plant).

| Organisms live in deserts | Organisms live in forests |
|---|---|
| .................................... | .................................... |
| .................................... | .................................... |
| .................................... | .................................... |

**4 (A) Complete the following sentences :**

1. During swallowing, the food passes from the throat to the .............. then to the .............. inside your digestive system.
2. During inhalation, air travels down from your throat to your lungs through ..............

**(B) Compare between :**

| Points of comparison | Inhalation | Exhalation |
|---|---|---|
| **1. Diaphragm movement :** | .................................... | .................................... |
| **2. Size of chest cavity :** | .................................... | .................................... |
| **3. The air is rich in :** | .............................. **gas.** | .............................. **gas.** |

## Model Exam 4

**1 (A) Write the scientific term of each of the following :**

1. A property that helps animals blend in with their surrounding environment. (........................)
2. A system that works inside the human body such that it keeps the human away from danger. (........................)
3. The energy that is used to operate television. (........................)
4. The force that makes an object moves a distance. (........................)

**(B) Give one example for the following :**

One of the sources of light which gives out its own light. (........................)

**2** **(A) Choose the correct answer :**

1. The potential energy of an object, depends on ..............
   a. its mass only.
   b. its height from the Earth's surface only.
   c. its mass and its height from the Earth's surface.
   d. its temperature.
2. .............. is considered as a behavioral adaptation in the panther chameleon.
   a. Puffing up its body during danger
   b. Each eye can move independently
   c. V-shaped feet
   d. Long sticky tongue
3. From the structural adaptation of water lily plant is that ..............
   a. it has long roots.
   b. it has sharp spines.
   c. it has tiny leaves.
   d. it has wide leaves.
4. All of the following are examples of motion except ..............
   a. a running person.
   b. a ball travelling through the air.
   c. a flying bird.
   d. a sleeping dog.

**(B) What happens if ... ?**

Humans stop throwing waste materials to waterways and soil in an ecosystem.

.................................................................................................

.................................................................................................

**3** **(A) Correct the underlined words :**

1. The balanced forces cause the object to move. (..........................)
2. When you turn on a radio, the electrical energy changes into light energy. (..........................)
3. Potential energy depends on the speed of an object. (..........................)
4. The system that works with the eyes of living organisms for seeing objects is the digestive system. (..........................)

**(B) A deer runs a distance of 200 meters in 5 seconds. Calculate its speed.**

.................................................................................................

.................................................................................................

**4** **(A) Complete the following sentences :**

1. On hearing an alarm ring, the sensory receptors that are found in the .............. send a message through a network of nerves to the .............. which determines what to do to avoid danger.
2. Ants use their sense of .............. to communicate with each other, while bees use .............. by doing a special dances to communicate with each other.
3. If the kinetic energy of a moving body decreases, its speed will ..............

**(B) Compare between :**

| Points of comparison | Polar bear | Forest bear |
|---|---|---|
| 1. Habitat : | ..................................<br>.................................. | ..................................<br>.................................. |
| 2. Fur color : | ..................................<br>.................................. | ..................................<br>.................................. |

## Model Exam 5

**1 (A) Choose the correct answer :**

1. When a car suddenly stops, the passengers move ..............
   a. backward. b. forward. c. upward. d. downward.
2. Reading and writing are common types of communication in .............. world.
   a. humans b. animals c. birds d. plants
3. Bears that live in forests have fur .............. that of polar bears.
   a. whiter than b. darker than
   c. similar to d. brighter than
4. When the roller coaster stops, its energy of motion ..............
   a. doesn't change. b. increases.
   c. decreases. d. becomes zero.

**(B) What happens if ... ?**

The length of acacia taproot doesn't exceed 3 meters downward.

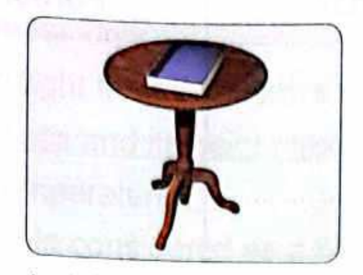
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**2 (A) Put (✓) or (X) :**

1. At night, cats eyes look like small lighted lamps. ( )
2. The sandy-colored fur of caracal helps it blend in with snow in polar environment. ( )
3. After car collision, the airbags deflate as fast as they inflate. ( )
4. The stopped object can't move until a force acts on it. ( )

**(B) Look at the following pictures, then choose if the forces are "balanced" or "unbalanced" :**



1. A book on a table
**(Balanced – Unbalanced)**



2. A seesaw
**(Balanced – Unbalanced)**

**3 (A) Write the scientific term of each of the following :**

1. A type of foxes that has sandy-colored fur to adapt its desert environment. (..........................)
2. It is the force that pulls objects toward the center of Earth. (..........................)
3. Safety equipment used to provide soft cushion, when it is inflated automatically with a gas during collision of cars. (..........................)
4. A plant lives in salt water habitat and has long, strong roots to resist the water waves. (..........................)

**(B) Give a reason for the following :**

Branches of acacia tree are gather on the top of its trunk.

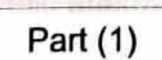
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**4 (A) Correct the underlined words :**

1. Keeping the position of an object relative to a fixed point represents motion. (..........................)
2. Moving an object towards you represents a pushing force. (..........................)
3. Seatbelts absorb the energy of the car due to its collision and gets inflated. (..........................)
4. Under the effect of pushing force of gravity, anything falls down to the ground. (..........................)

**(B) Look at the following figures, then complete the following sentences :**



Part (1)



Part (2)




Part (3)

1. These body parts belong to the .......... system.
2. When you touch a freezing bottle of water, part number .......... in your hand sends a message through part number .......... to reach part number .......... telling you that this bottle is very cold.

## Model Exam 6

**1 (A) Choose the correct answer :**

1. All the following properties are considered as structural adaptations in the panther chameleon, except ..............
   a. each eye can move independently.
   b. openning its mouth wide at danger.
   c. V-shaped feet. d. long sticky tongue.
2. When an object is in motion, this means that its .............. changes.
   a. color b. shape c. size d. position
3. Pine tree has a triangular shape to make snow slides over its branches without breaking it. This structural adaptation makes this tree face the extreme cold climate like the feet of ..............
   a. caracal. b. penguin. c. fennec fox. d. brown bear.
4. If there is nothing to stop the movement of an object, this object will ..............
   a. stay in motion. b. suddenly stop.
   c. stop after few minutes. d. stop after few seconds.

**(B) Give a reason for the following :**

Some animals have the ability to make camouflage adaptation.

..............................................................................................................................

**2 (A) Put (✓)**

1. Unbalanced forces keep an object in its place without moving. ( )
2. The moving objects only have energy, while the objects that don't move have no energy. ( )
3. In penguin's feet, the cold blood vessels can warm up the warm blood vessels. ( )
4. The Moon is not considered as a light source. ( )

**(B) Classify the following animals in the table below :**

(Fishing cat – Dolphin – Tarsier – Bat)

| Animals have super sight sense | Animals have super hearing sense |
|---|---|
| .................................... | .................................... |
| .................................... | .................................... |

**3** **(A) Write the scientific term of each of the following :**

1. An organ in the human digestive system that has tiny blood vessels to absorb the nutrients through its walls. (........................)
2. A feature in the bull shark, in which the upper surface of its body is darker than its lower surface. (........................)
3. The ability to do work or cause a change. (........................)
4. The organ used to differentiate between the taste of different types of food. (........................)

**(B) Amir rides his bike and covers a distance of 150 meters in 5 seconds. Calculate the speed of the bike.**

.....................................................................................................................................

.....................................................................................................................................

**4** **(A) Correct the underlined words :**

1. Two objects have the same mass and stopped at the same height, have the same kinetic energy. (........................)
2. A car battery stores a form of kinetic energy known as chemical energy. (........................)
3. As the object moves faster, its potential energy increases. (........................)
4. During hitting a ball the cricket bat transfers its light energy to the ball. (........................)

**(B) Look at the following figures that represent the respiration process, then answer the questions :**

1. Which figure represents inhalation. (..............)
2. Which figure represents exhalation. (..............)
3. In figure (a) ............. muscle contracts and the size of chest .............
4. The air that comes out in figure (b) is rich in ............. gas.

Figure (a) Figure (b)

# Model Exam 7

## 1 (A) Choose the correct answer :

1. Camouflage means that the animal ..............
   a. can be seen easily among its surrounding.
   b. is hard to be seen among its surrounding.
   c. is easily to be seen by its preys.
   d. can be seen easily by its predators.
2. The five senses of humans and animals include ..............
   a. sight, hearing, touch, smell, and movement.
   b. sight, movement, taste, touch, and smell.
   c. taste, touch, movement, hearing, and smell.
   d. sight, hearing, taste, smell, and touch.
3. When an object moves down a ramp, its stored energy ..............
   a. increases.
   b. doesn't change.
   c. changes to a less active form of energy
   d. changes to a more active form of energy
4. The structural adaptation that helps the fishing cat to catch a prey at night, is that ..............
   a. it can feel the heat of prey's body.
   b. it can hide inside the forest.
   c. it can digest its prey easily.
   d. it has excellent night vision.

### (B) What happens if ... ? (according to the change of energy)

Friction occurs between the string and the other parts of Newton's cradle during collision.

..............................................................................................

## 2 (A) Complete the following sentences :

1. Among animals that can live in polar environment are .............. and ..............
2. Television operates by .............. energy and it produces .............. and .............. energies.
3. When objects collide with each other, .............. is transferred between them.
4. Echolocation is a type of communication that depends on the sense of .............. , and it used by some animals such as .............. and ..............







## Part 2

**(B) Choose from column (A) what suits it in both columns (B) and (C) :**

| (A) Living organisms | (B) Species | (C) Habitats |
|---|---|---|
| **1. Bull shark :** | a. reptile | A. savannah |
| **2. Starred agama :** | b. amphibian | B. salt and fresh water |
| **3. Acacia :** | c. fish | C. wet environment |
| **4. Frog :** | d. plant | D. desert environment |

1. ........ → ........ 2. ........ → ........ 3. ........ → ........ 4. ........ → ........

**3 (A) Put (✓) or (X) :**

1. Exposing to air rich in dust for a long time harms the human respiratory system. ( )
2. If two objects travel for equal period of time, the object that travels a greater distance have a slower speed. ( )
3. When an object moves faster, it gains larger amount of kinetic energy. ( )
4. Camouflage helps animals adapt the extreme weather conditions in their ecosystems. ( )

**(B) Find the speed of a horse, if you know that it covers 250 meters in 5 seconds.**

........................................................................................................

**4 (A) Write the scientific term of each of the following :**

1. A process through which the body gets oxygen from the air and expels out carbon dioxide. (........................)
2. An animal that has multiple bright colors to provide camouflage in its environment and has V-shaped feet. (........................)
3. The liquid that stores chemical energy, and it is used to move cars. (........................)
4. The energy that is stored in food and batteries. (........................)

**(B) Give a reason for the following :**

It is very dangerous to live in an ecosystem that has a high level of air pollution.

........................................................................................................

........................................................................................................

# Model Exam 8

## 1 (A) Put (✓) or (X) :

1. A moving object is not affected by friction force. ( )
2. Some animals prefer hunting during the night than hunting during the day. ( )
3. The object that travels down a ramp is affected by the force of gravity. ( )
4. Eyes are one of the five senses, on which humans and animals depend on to see the surroundings. ( )

**(B) Give a reason for the following :**

The measuring unit of speed is km/hr or m/sec.

.................................................................................................................................

.................................................................................................................................

## 2 (A) Choose the correct answer :

1. If the angle of inclination of a ramp increases, the kinetic energy of an object moving down it will ..............
   a. decrease. b. increase. c. remain as it is. d. be destroyed.
2. In Morse code, long flashes can be used to represent ..............
   a. dots only. b. dashes only.
   c. both dots and dashes. d. neither dots nor dashes.
3. Umbrella-shaped trees include ..............
   a. mangrove tree and acacia tree. b. mangrove tree and kapok tree.
   c. acacia tree and kapok tree. d. barbary fig and water lilies.
4. Fennec foxes and arctic foxes live in burrows, this belongs to .............. adaptation.
   a. only structural b. only behavioral
   c. both structural and behavioral d. neither structural nor behavioral

**(B) A train travels from Cairo to Alexandria for a distance of 220 kilometers in 2 hours. Find its speed.**

.................................................................................................................................

.................................................................................................................................

## 3 (A) Correct the underlined words :

1. As the mass of a car increases, the damage that occurs during its collision <u>decreases</u>. (........................)
2. <u>Air</u> enters the mouth of fish and then passes across its gills. (........................)

3. The sense of eyesight of owls is weaker than that in bats. (........................)
4. Groups of ants within a colony have similar roles. (........................)

**(B) What happens if ...?**

The amount of food in the ant's colony decreases.

.................................................................................................................................

.................................................................................................................................

**4 (A) Cross out the odd word :**

1. The Sun – The Moon – Fire – Candle. (........................)
2. Bats – Fireflies – Blind person's cane – Dolphins. (........................)
3. Fennec fox – Starred agama lizard – Panther chameleon – Bull shark. (........................)
4. Guitar – Flashlight – Radio – Alarm bell. (........................)

**(B) Look at the opposite figure, then complete the following sentences :**

1. The person in this figure use .............. to land safely.
2. The idea of person landing in this figure is the same idea of stopping the motion of ..............

## Model Exam 9

**1 (A) Complete the following sentences :**

1. The bee dances in a figure-eight pattern while vibrating its .............., and the other bees read the .............. of the dancer and then fly off to the specific location.
2. When two cars move on the same road, car (A) moves at speed equals 10 m/sec., and car (B) moves at speed equals 20 m/sec., this means that car .............. moves longer distance than car .............. in the same time.
3. Humans, amphibians and reptiles have .............. to breath oxygen gas in air.
4. Among safety equipment used during collision of cars are .............. and ..............

**(B) Give a reason for the following :**

If you push two similar toy cars, one of them may travel for a longer distance than the other.

.................................................................................................................................

**2 (A) Put (✓) or (x) :**

1. As human needs clean water to drink, fish needs clean air to breathe. ( )
2. Seatbelt is one of the safety equipment in cars. ( )
3. Animals communicate with each other by using different senses. ( )
4. The desert lizard blend in with large green trees, to hide from its enemies. ( )

**(B) Find the speed of a runner, if you know that he covers 400 meters in 20 seconds.**

.................................................................................................................................

.................................................................................................................................

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**3 (A) Write the scientific term of each of the following :**

1. A group of ants which is responsible for protecting the colony from dangers. (.........................)
2. An animal that has a layer of fat and dense feathers to adapt extreme cold weather. (.........................)
3. The visible form of energy, that enable us to see. (.........................)
4. A system that works inside the living organism's body such that it keeps the organism away from danger. (.........................)

**(B) What happens if ...?**

Bats cannot use echolocation property.

.................................................................................................................................

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**4 (A) Choose the correct answer :**

1. All the following sentences about energy are correct, <u>except</u> ..............
   a. It can be stored in an object.
   b. It can be transferred from an object to another one.
   c. It can be transformed from one form into another one.
   d. It can be destroyed and cannot be created.
2. The blind person's cane and .............. emit a high-pitched sound that bounces off objects forming an echo.
   a. lizards b. polar bears c. bull sharks d. bats
3. Speed is a measurment of how .............. something is moving.
   a. long b. tall c. fast d. heavy
4. A very big truck needs .............. to move.
   a. very small engine b. small engine
   c. very big engine d. no engine

(B) Write the senses that can be used in each of the following types of communication in the table below :

| Types of communication | The used senses |
|---|---|
| 1. Watching TV. | ...................................................... |
| 2. Flashing lights of fireflies. | ...................................................... |
| 3. Echolocation in dolphins. | ...................................................... |
| 4. Using the cell phone. | ...................................................... |

## Model Exam 10

**1 (A) Choose the correct answer :**

1. Humans and cars are ..............
   a. not able to produce sound energy.
   b. not able to produce kinetic energy.
   c. similar in obtaining energy to move.
   d. similar in adaptation to live and survive.
2. Push or pull actions are considered as types of ..............
   a. force. b. device. c. energy. d. adaptation.
3. The nervous system can do all the following functions, except ..............
   a. gathering information.
   b. processing information.
   c. sending signals.
   d. falling of rains.
4. The speed of an object is measured in .............. or meters per seeond.
   a. kilograms per hour
   b. grams per second
   c. kilometers per hour
   d. kilograms per kilometers

**(B) Give a reason for the following :**

The spinal cord plays an important role in the nervous system to do its function.

..........................................................................................................................................

..........................................................................................................................................

**2** **(A) Complete the following sentences :**

1. When you push a table on the floor, the .............. transfers from your body to the table.
2. Echolocation property is used by .............. and .............. animals to locate their preys.
3. Most of .............. energy in the Newton's cradle is transferred from the first ball to the rest of balls.
4. To increase the .............. energy of any moving object we must increase its speed.

**(B) A car moves forward a distance 100 kilometers in time equals 2 hours. Calculate the speed of the car.**

.................................................................................................................

.................................................................................................................

**3** **(A) Choose from column (B) what suits it in column (A) :**

| (A) | (B) |
|---|---|
| 1. Esophagus | a. absorbs water from the undigested food to become solid waste. |
| 2. Small intestine | b. mixes the food with an acid and digestive juices. |
| 3. Large intestine | c. the digestion begins in it. |
| 4. Stomach | d. food gets completely digested in it. |
| 5. Mouth | e. is a tube has muscles that move the food down into the stomach. |
| | f. solid waste leaves the body through it. |

1. .............. 2. .............. 3. .............. 4. .............. 5. ..............

**(B) What happens if ... ?**

You are standing on the ground and you let a ball out of your hand.

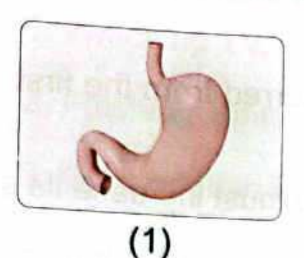
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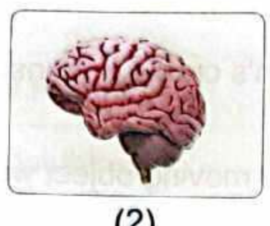
**4** **(A) Put (✓) or (✗) :**

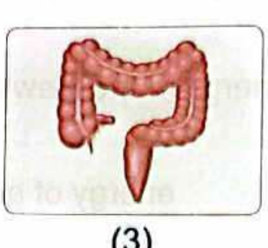
1. If two objects cover the same distance in the same time, so they have the same speed. ( )
2. In a complete dark room, you can use the senses of touching, tasting, smelling and hearing only. ( )
3. The moving objects only have energy, while the objects that don't move have no energy. ( )

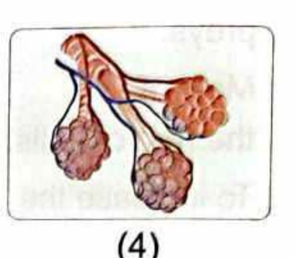
4. We cannot create a new form of energy, and also we cannot destroy an existed form of energy. ( )

**(B) You have some pictures of different parts of the human body. Write down the organ number in front of the system to which it belongs in the following table :**


(1)


(2)


(3)


(4)

| System name | Organ number |
|---|---|
| 1. Digestive system : | .................................... |
| 2. Respiratory system : | .................................... |
| 3. Nervous system : | .................................... |

# Final Examinations
of some governorates



on the first term 2022

## 1 Cairo Governorate

Nasr City Educational Zone

**1 Put (✓) or (✗) in front of the following statements :**

1. Exhaled air carries oxygen. ( )
2. A person can identify spoiled food through the touch sense. ( )
3. The migration of birds to search for food is considered as form of behavioral adaptation. ( )
4. The skin is the sensory organ that makes you feel the smoothness of the cloth. ( )

**2 Complete the following sentences:**

1. The eye sends messages to .................. through the nerves.
2. Bats use .................. as a means of communication with each other.
3. The spinal cord is an important organ of the .................. system.
4. A tube with muscles that helps to push food into the stomach, is called ..................

**3 Choose the correct answer :**

1. One of the behavioral adaptations that helps the animal protect itself from enemies ..................
   a. camouflage. b. extinction. c. migration. d. reproduction.
2. Animals can communicate with each other through ..................
   a. sounds and lights. b. talking.
   c. reading. d. writing.
3. Which of the following allows the light to pass through it ? ..................
   a. A rock. b. Moon. c. Wood. d. Glass.
4. Which of the following is a source of light ? ..................
   a. Eye. b. Moon. c. Fire. d. Mirror.

**4 (A) A dolphin can locate living organisms and things under the surface of the water. Explain why?**

..................................................................................................

..................................................................................................

**(B) Give one example :**

An nocturnal animal that depends on its sense of heat to get its prey.

..................................................................................................

## 2 Cairo Governorate — Heliopolis Educational Zone

### 1 Choose the correct answer :

1. Raising the thumb up or lower it down is a kind of ..................
   a. colors. b. codes. c. waves. d. lights.
2. Bats are .................. animals.
   a. nocturnal b. morning c. not hearing d. not flying
3. If a car covered a distance of 10 meters in a time of 2 seconds, so the speed of the car is ..................
   a. 50m/sec. b. 20m/sec. c. 20m/sec. d. 5m/sec.
4. The roots of palm plants help them to ..................
   a. stand strong against the wind. b. reach the underground water.
   c. fixing plants in the soil. d. all the above.
5. The force that causes an object to move a distance is called ..................
   a. work. b. potential. c. gravity. d. pull.

### 2 Put (✓) or (✗) :

1. The respiratory system is responsible for the entry of air into the body. ( )
2. Dolphins have a strong sight sense. ( )
3. Wood is a transparent object that allows light to pass through it. ( )
4. The seesaw moves up and down becasuse the forces that act on it are unbalanced. ( )
5. The force that slows down or decreases the speed of an object is gravity. ( )

### 3 (A) Write the scientific term of each of the following :

1. It is the gained energy during the motion of objects. (........................)
2. A measuring unit for long distances. (........................)
3. A type of adaptation that helps an animal to hide. (........................)

**(B) 1. Give a reason for the following :**

Some dogs live in a cold environment, while other dogs live in a hot environment. In your opinion, which of them have thick fur ? And why ?

..........................................................................................

..........................................................................................

**2. Give two examples :**

Objects that are considered as sources of light.

..........................................................................................

..........................................................................................

## 3 Cairo Governorate — El-Sahel Educational Zone

### 1 Choose the correct answer :

1. One of the behavioral adaptations that helps the animal protect itself from enemies ..................
   a. camouflage.
   b. extinction.
   c. immigration.
   d. reproduction.
2. .................. is covering the body of arctic fox.
   a. Heavy clothes
   b. Heavy skin
   c. Thick fur
   d. Many feathers
3. .................. are panting to lower their body temperature.
   a. Whales b. Owls c. Foxes d. Bats
4. The ability to do work is ..................
   a. energy. b. force. c. push. d. pull.
5. Tapetum lucidum exists in all of the following, except ..................
   a. horses. b. cats. c. humans. d. dogs.

### 2 Put (✓) or (✗) :

1. Exhaled air carries oxygen. ( )
2. When the roller coaster slides down fast, its kinetic energy increases. ( )
3. In the electric fan, the kinetic energy is converted into electric energy. ( )
4. Some animals can see at night. ( )
5. Human can identify spoiled food through touch sense.

### 3 (A) Choose from column (B) what suits it in column (A) :

| Column (A) | Column (B) |
|---|---|
| 1. Gravity | a. the energy stored inside the body. |
| 2. Friction | b. the force that pulls things downwards. |
| 3. Speed | c. a force that arises between the surfaces of two contacted bodies. |
| 4. Potential energy | d. energy stored inside dry batteries. |
| | e. the distance covered per time unit. |

1. .................. 2. .................. 3. .................. 4. ..................

**(B) Calculate that speed of a runner that covers 150 meters in 10 seconds.**

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## 4 Cairo Governorate — El-Zeitoun Educational Zone

### 1 Choose the correct answer :

1. When light falls on a dark surface, ....................
   a. the surface absorbs the light.
   b. light passes through it.
   c. the light is refracted.
   d. nothing happens.
2. What happens to living organisms that can't adapt to the conditions of their environment ? ....................
   a. Their number increases.
   b. They can't stay in the environment.
   c. They keep their number constant.
   d. They can survive in the environment.
3. .................... energy affects the sensory receptors in the eye causing vision.
   a. Sound
   b. Kinetic
   c. Light
   d. Magnetic
4. All of the following are examples of pulling force, <u>except</u> ....................
   a. kicking a ball.
   b. pulling the rope.
   c. opening the desk's drawer.
   d. lifting up your bag.

### 2 Put (✓) or (✗) :

1. Human can identify spoiled food through touch sense. ( )
2. Bats use their sense of smell to avoid dangers. ( )
3. The skin is the sensory organ that makes you feel the smoothness of cloth. ( )
4. Energy is neither destroyed nor created from nothing. ( )

### 3 Choose from column (B) what suits it in column (A) :

(A)

| Column (A) | Column (B) |
|---|---|
| 1. Carbon dioxide | a. process that diaphragm expands and moves up. |
| 2. Exhalation | b. the process of pushing air in and out of the body. |
| | c. is a gas that is produced by respiration process. |

1. ....................  2. ....................

(B)

| Column (A) | Column (B) |
|---|---|
| 1. Gravity<br>2. Friction<br>3. Speed<br>4. Potential energy | a. the energy stored inside the body.<br>b. the force that pulls things downwards.<br>c. a force that arises between the surfaces of two contacted bodies.<br>d. energy stored inside dry batteries.<br>e. the distance covered per time unit. |

1. .................. 2. .................. 3. .................. 4. ..................

**4 Complete the following sentences :**

1. The lungs are one of the important organs in the .................. system.
2. When light is reflected off a surface in different directions, so that surface is ..................
3. The fat layer under the animal's skin to warm it is considered a .................. adaptation.

**5 (A) What is a common mean of communication between humans and some animals?**

..............................................................................................

**(B)** A dolphin can locate living organisms and things under the surface of the water. **Explain why ?**

..............................................................................................

## 5 Giza Governorate — North Giza Educational Zone

**1 Complete the following sentences using the words between brackets :**

1. From the opaque objects .................. (carton – glass)
2. Sensory receptors send a message .................. (from the brain to the muscles – from the sensory organs to the brain)
3. When a person pushes a car forward, his body begins to sweat heavily because his body .................. his stored energy. (consumes – increases)
4. The gas oven converts .................. energy stored in the natural gas into heat energy to cook the food. (chemical – electrical)

**2 Choose the correct answer :**

1. When a body moves forward, the change that occurs is in ..................
   a. the position of the body. b. the size of the body.
   c. the mass of the body. d. the Earth's gravity.

2. All the following represent the pushing force, except to ..................
   a. kick a ball. b. press on electrical switch.
   c. close the disk's drawer. d. lifting up a bag.
3. The .................... system helps us to translate messages that come from our surroundings, such as smells and sounds.
   a. respiratory b. digestive c. nervous d. circulatory
4. Raising the thumb up or lower it down is a kind of ..................
   a. colors. b. codes. c. waves. d. lights.

**3 Put (✓) or (✗) :**

1. The ear is the sense organ which is responsible for seeing objects. ( )
2. The human digestive system breaks down food into nutrients. ( )
3. When the position of a body changes according to a fixed point, the body moves. ( )

**4 (A) Calculate the speed of a train that covers 600 kilometers in a time of 6 hours.**

..................................................................................................................

**(B) Look at the following figures, then answer the questions :**

Fig. (A) Fig. (B)

Which of the previous figures represents the reflection of light rays from a wooden spoon? And explain why?

..................................................................................................................

..................................................................................................................

**5 Choose from column (B) what suits it column (A) :**

| Column (A) | Column (B) |
|---|---|
| 1. Gravity | a. the energy stored inside the body. |
| 2. Friction | b. the force that pulls things downwards. |
| 3. Speed | c. a force that arises between the surfaces of two contacted bodies. |
| 4. Potential Energy | d. energy stored inside dry batteries. |
| | e. the distance covered per time unit. |

1. .................. 2. .................. 3. .................. 4. ..................

## 6 Giza Governorate — 6th of October Educational Zone

### 1 Choose the correct answer :

1. One of the behavioral adaptation that helps animal protect itself from enemies is ....................
   a. camouflage. b. extinction. c. reproduction. d. digestion.
2. The force that slows down (decreases) the speed is called ....................
   a. push. b. gravity. c. friction. d. pull.
3. The organ responsible for the sight sense is ....................
   a. the ear. b. the tongue. c. the nose. d. the eye.
4. Ability to do work is ....................
   a. energy. b. force. c. push. d. pull.
5. An animal has the ability to turn its head in all directions is the ....................
   a. snake. b. jerboa c. dolphin. d. owl.

### 2 Put (✓) or (X) :

1. Wood is a transparent object that allows light to pass through it. ( )
2. A static ball moves on the ground if it is affected by a force. ( )
3. In the electric fan, the kinetic energy is converted into heat energy. ( )
4. Light travels in straight lines. ( )
5. Some animals can see at night. ( )

### 3 (A) Complete the following sentences using the words between brackets :

1. The speed of moving object = .................... (distance x time – $\frac{\text{distance}}{\text{time}}$)
2. Fish have .................... to breath. (gills – lungs)
3. One of the light reflecting materials is .................... (wood – mirror)
4. .................... is a source of light. (the Sun – the eye)

**(B) Some dogs live in a cold environment, while others live in a hot environment. in your opinion, which of them have thick fur ? And why ?**

..........................................................................................................

..........................................................................................................

..........................................................................................................

## 7 Alexandria Governorate

### 1 Choose the correct answer :

1. Which of the following is a source of light ? ....................
   a. Eye.   b. Moon.   c. Fire.   d. Mirror.
2. Bats are .................... animals.
   a. nocturnal   b. morning   c. not hearing   d. not flying
3. In the opposite figures which ball has the greatest potential energy ? ....................
   a. Figure (1).
   b. Figure (2).
   c. Figure (3).
   d. Figure (4).

(1) (2) (3) (4)

4. The force that pulls the objects down toward the center of the Earth is ....................
   a. gravity.   b. pushing.   c. water.   d. wind.
5. The force that slows down or decreases the speed of an object is ....................
   a. push.   b. gravity.   c. friction.   d. pull.

### 2 Put (✓) or (✗) :

1. Foxes have strong hearing sense. ( )
2. Wood is a transparent object that allows light to pass through it. ( )
3. Food turns from complex to simple during the digestion process. ( )
4. The chemical energy in a battery can be converted into electrical energy. ( )

### 3 Choose from column (B) what suits it in column (A) :

| Column (A) | Column (B) |
|---|---|
| 1. Camouflage | a. it helps us to see. |
| 2. Smell | b. a type of adaptation that helps an animals to hide. |
| | c. ants use it to communicate. |

1. ....................   2. ....................

### 4 (A) Complete the following sentences :

1. The different languages are considered as ....................
2. During exhalation, .................... gas comes out of the lung.

**(B) Look at the following figures, then answer the questions :**

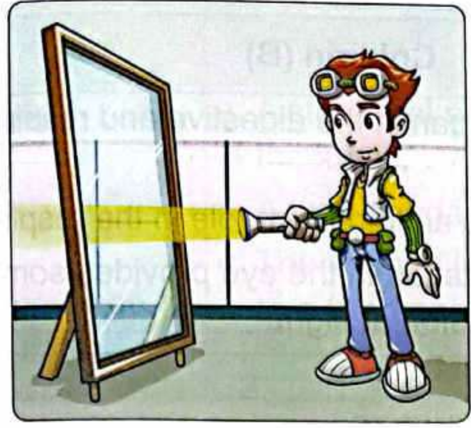


Fig. (A)



Fig. (B)

1. Which figure represents a transparent object ? (..........................)
2. Which figure represents an opaque object ? (..........................)

## 8 El-Qualyoubia Governorate — Obour Educational Zone

### 1 Choose the correct answer :

1. The organ responsible for the sight sense is ....................
   a. the ear. b. the tongue. c. the nose. d. the eye.
2. One of the behavioral adaptations that helps the animal protects itself from enemies ....................
   a. camouflage. b. extinction. c. immigration. d. reproduction.
3. .................... energy affects the sensory receptors in the eye, causing vision.
   a. Sound b. Kinetic c. Light d. Magnetic
4. Animals can communicate with each other through ....................
   a. sound and lights. b. talking.
   c. reading. d. writing.
5. The roots of palm plants help them to ....................
   a. stand strong against the wind. b. reach the underground water.
   c. fixing plants in the soil. d. all the previous.
6. The force that pulls the objects down toward the center of the Earth is ....................
   a. gravity. b. pushing. c. water. d. wind.
7. The chemical energy stored in batteries is considered a form of ....................
   a. potential energy. b. kinetic energy.
   c. heat energy. d. light energy.

### 2 Put (✓) or (✗) :

1. Food turns from complex to simple during the digestion process. ( )
2. While running and making an effort, the number of breathing times decreases ( )
3. Sending bad smells by Acacia tree is a behavioral adaptation. ( )

## 3 Match column (B) with column (A) :

| Column (A) | Column (B) |
|---|---|
| 1. Tapetum lucidum<br>2. Pharynx | a. it is a common organ in the digestive and respiratory systems.<br>b. a muscle that has an important role in the respiration.<br>c. a structural adaptation in the eye provides some. animal a better vision at night. |

1. .................... 2. ....................

## 4 Complete the following sentences from the two brackets :

1. .................... destroys the lungs and causes many diseases. (Breathing – Pollution)
2. The speed of a moving object = .................... (distance × time – $\frac{\text{distance}}{\text{time}}$)

## 5 Answer the following question :

Rabbits have long and strong hind legs that help them to jump quickly and escape in dangerous times. Determine the type of adaptation.

..............................................................................................

## 9 El-Sharkia Governorate — Al-Hessinia Educational Zone

## 1 Choose the correct answer :

1. One of the behavioral adaptations that helps the animal protect itself from enemies ....................
   a. camouflage. b. extinction. c. immigration. d. reproduction.
2. All of the following are components of the nervous system, except ....................
   a. spinal cord. b. heart. c. nerves. d. brain.
3. Objects need a force to move, this force is represented in (called) ....................
   a. pushing only. b. pulling only.
   c. pushing and pulling together. d. the Earth gravity only.

## 2 Put (✓) or (✗) :

1. The Moon is a source of light. ( )
2. Red and green traffic lights are considered codes. ( )
3. When you kick a ball, kinetic energy is produced. ( )

## 3 Choose from column (B) what suits it in column (A) :

| (A) | (B) |
|---|---|
| 1. Motion<br>2. Gills<br>3. Camouflage | a. A structural adaptation whose function is similar to the lungs.<br>b. A type of adaptation that helps an animal to hide.<br>c. The change in the position of an object with respect to a fixed point. |

1. .................... 2. .................... 3. ....................

## 4 Complete the following sentences using the words between brackets :

1. The time that the body takes to react to different information from the environment is called .................... (reflex action – reaction time)
2. Bats use .................... as a means of communication with each other. (sound – light)
3. The ability to do a work is called .................... (energy – gravity)

## 5 (A) Answer the following questions :

1. A dolphin can locate living organisms and things under the surface of the water. Explain Why?

   ....................................................................................................

2. When you sit on the chair without moving. What is the name of the force that pulls you downward ?

   ....................................................................................................

### (B) Give a reason for the following:

The leaves of plants that float above the surface of the water are so wide.

....................................................................................................

# 10 El-Garbia Governorate — El-Santa Educational Zone

## 1 Choose the correct answer :

1. When a ball stands on the ground without moving, the forces acting on it are ....................
   a. balanced. b. unbalanced. c. push it up. d. not equal.
2. The chemical energy stored in batteries is considered a form of ....................
   a. kinetic energy. b. potential energy.
   c. heat energy. d. light energy.
3. The ability to do work is ....................
   a. force. b. energy. c. pull. d. push.

## 2 Choose from column (B) what suits it in column (A) :

| (A) | (B) |
|---|---|
| 1. Jerboa | a. it depends on the body's sense of heat for predation. |
| 2. Snake | b. it depends on the echo of the sound in locating the prey |
| 3. Bat | c. it depends on its hind legs to jump. |

1. .................... 2. .................... 3. ....................

## 3 Put (✓) or (x) :

1. Gravity pulls objects towards the center of the Earth. (   )
2. In the electric fan, the kinetic energy is converted into electric energy. (   )
3. When the roller coaster slides down fast, its kinetic energy increases. (   )

## 4 (A) If the two cars moved at the same time for 20 seconds, car (A) covered a distance of 100 meters, while car (B) covered a distance of [illegible] meters. Which of the two cars has a higher speed ?

..........................................................................................

..........................................................................................

**(B) Calculate the speed of a train that covers 600 km in a time of 6 hours.**

..........................................................................................

## 5 Complete the following sentences using the words between brackets :

1. .................... is an opaque object.
(Carton – Glass)
2. .................... is the organ that we can use to send or receive a light code.
(Eye – Heart)
3. The time that the body takes to react to different information from the environment is called ....................
(reflex action – reaction time)

## 11 Kafr El-Sheikh Governorate — Al-Hamoul Educational Zone

### 1 Choose the correct answer :

1. Raising the thumb up or lower it down is a kind of ...................
   a. colors. b. codes. c. waves. d. lights
2. The organ responsible for the sight sense is ...................
   a. the ear. b. the tongue. c. the nose. d. the eye.
3. One of the behavioral adaptations that help the animal protect itself from enemies ...................
   a. camouflage. b. extinction.
   c. immigration. d. reproduction.
4. An animal that has the ability to turn its head in all directions is ...................
   a. snake. b. jerboa. c. dolphin. d. owl.
5. When a body moves forward, the change that occurs is in ...................
   a. the position of the body. b. the size of the body.
   c. the mass of the body. d. the Earth's gravity.

### 2 Put (✓) or (✗) :

1. The ear is the sense organ which is responsible for seeing objects. ( )
2. The brain is responsible for processing information. ( )
3. Foxes have a strong hearing sense. ( )
4. In order for the code to be translated, the brain must identify it. ( )
5. Force is the ability to do work or cause change. ( )

### 3 Match column (B) to column (A) :

| (A) | (B) |
|---|---|
| 1. Light | a. an animal with a bowl-like face. |
| 2. Owl | b. it is the visible form of energy that is transmitted in the form of waves. |
| | c. it depends on its hind legs to jump. |

1. ...................... 2. ......................

### 4 Complete the following sentences from the two brackets :

1. .................. is an opaque object. (Wood – Glass)
2. .................. is the organ that we can use to send or receive a sound code. (Ear – Heart)
3. .................. tree has long and strong roots to resist the water waves (Palm – Mangrove)

## 12 El-Behira Governorate — Abou-Homous Educational Zone

### 1 Choose the correct answer :

1. Tapetum lucidum exists in all of the following, <u>except</u> ..................
   a. the horse. b. the cat. c. the human. d. the dog.
2. Bats are .................. animals.
   a. nocturnal b. morning c. not hearing d. not flying
3. When a body moves forward, the change that occurs is in ..................
   a. the position of the body. b. the size of the body.
   c. the mass of the body. d. the Earth's gravity.
4. The force that slows down or decreases the speed of an object is ..................
   a. push. b. gravity. c. friction. d. pull.

### 2 Put (✓) or (✗) :

1. The ear is the sense organ which is responsible for seeing objects. ( )
2. Exhaled air carries oxygen. ( )
3. In electric fan, the kinetic energy is converted into electric energy. ( )
4. Red and green traffic lights are considered codes. ( )

### 3 Complete the following sentences using the words between brackets :

1. If Noor travels with her bicycle a distance of 10 km in two hours, then she is moving at a speed of .................. (15 km/hr. – 5 km/hr.)
2. What carries the message from your eyes to your brain when you see something ?
   .................. (Nerves – Muscle)
3. What kind of energy is stored inside the battery ? ..................
   (Chemical energy – Heat energy)
4. The force that pulls things down is to the ground .................. (friction – gravity)

### 4 Match column (B) to column (A) :

| (A) | (B) |
|---|---|
| 1. Light<br>2. Smell | a. it depends on its hind legs to jump.<br>b. it is the visible form of energy that is transmitted in the form of waves.<br>c. ants use it to communicate. |

1. .................. 2. ..................

## 13 Beni-Suef Governorate — Beba Educational Zone

### 1 Choose the correct answer :

1. An animal that has the ability to turn its head in all directions is ..................
   a. snake. b. jerboa. c. dolphin. d. owl.
2. .................. energy affects the sensory receptors in the eye, causing vision.
   a. Sound b. Kinetic c. Light d. Magnetic
3. All of the following are examples of pulling force, except ..................
   a. kicking a ball. b. pulling the rope.
   c. opening the desk's drawer d. lifting up a ball.
4. A horse is faster than a human, as the human covers a .................. distance at the same time.
   a. less b. greater c. double d. twice
5. Each of the following is considered a source of light, except ..................
   a. the fire. b. the Sun. c. the lamp. d. the eye.

### 2 Put (✓) or (✗) :

1. The brain is responsible for processing information. ( )
2. When a pen falls down from your hand, then the acting force is the gravity force. ( )
3. Dolphins have a strong sight sense. ( )
4. Energy is neither destroyed nor created from nothing. ( )
5. Both humans and animals need a source of light to see. ( )

### 3 Choose from column (B) what suits it in column (A) :

| (A) | (B) |
|---|---|
| 1. Motion | a. a muscle that has an important role in the respiration process. |
| 2. The spinal cord | b. it gives a message to the muscle to contract. |
| 3. Diaphragm | c. the ability to do work. |
| 4. Work | d. the change in the position of an object with respect to a fixed point. |
| 5. Energy | e. the force that causes the body to move. |
| | f. electric energy is converted into kinetic energy. |

1. .................. 2. .................. 3. .................. 4. .................. 5. ..................

## 14 Assiut Governorate — Assiut Educational Zone

### 1 Choose the correct answer :

1. One of the behavioral adaptations that helps the animal protects itself from enemies ..................
   a. camouflage. b. extinction. c. immigration. d. reproduction.
2. To communicate through the sight sense we need ..................
   a. making a sound. b. availability of light.
   c. hearing music. d. touching something.
3. Each of the following is considered a source of light, except ..................
   a. the fire. b. the Sun. c. the lamp. d. the eye.
4. All of the following are examples of pulling force, except ..................
   a. kicking a ball. b. pulling the rope.
   c. opening the desk's drawer. d. dragging a car toy.
5. The ability to do work is ..................
   a. energy. b. force. c. push d. pull.

### 2 (A) Put (✓) or (✗) :

1. If the acting forces on a moving body decrease, the speed of this body increases. ( )
2. The nervous system is responsible for breathing. ( )
3. Bats use their sense of smell to avoid dangers. ( )
4. Seeing with our eyes is a way to help us collect information about the environment around us. ( )

**(B) Calculate the speed of a train that covers 600 kilometers in a time of 6 hours.**

..................................................................................................................

### 3 (A) Choose from column (B) what suits it in column (A) :

| (A) | (B) |
|---|---|
| 1. Carbon dioxide | a. a gas necessary for respiration. |
| 2. Oxygen | b. a structural adaptation whose function is similar to the lungs. |
| 3. Gills | c. it helps us to see. |
| | d. is a gas that is produced during respiration process. |

1. .................. 2. .................. 3. ..................

**(B) Look at the opposite figure, then answer the question :**

When the compressed spring is released, a change in energy occurs from .................. energy to .................. energy.

## 15 Sohag Governorate — Sohag Educational Zone

### 1 Complete the following sentences from the two brackets :

1. From the opaque objects .................... (carton – glass)
2. The amount of energy required to move an object through the force acting on is called .................... (work – potential)
3. From the organs that we can use to send or receive the code .................... (heart – ear)
4. The echo sound feature depends on .................... (hearing sense – sight sense)
5. .................... destroys the lungs and causes many diseases. (Breathing – Pollution)
6. .................... mix and grind food inside the mouth. (Teeth only – Teeth and tongue)

### 2 Put (✓) or (✗) :

1. Wood is a transparent object that allows light to pass through it. (   )
2. The digestive system in animals breaks down food into simple substances. (   )
3. Animals digging holes are a form of structural adaptation. (   )
4. Snakes have the ability to rotate their heads in all directions. (   )
5. When the position of the body changes according to a fixed point, the body moves. (   )

### 3 Answer the following :

1. Which of the following consumes less fuel a truck or a small car ?

...........................................................................................................

2. When you sit on the chair without moving. What is the name of the force that pulls you downward ?

...........................................................................................................

# Model Examinations

## El-Moasser Final Examination Models

### Model Exam 1

**1** (A) 1. b 2. c 3. d
4. c

(B) To prevent the driver and passengers from moving forward when the car suddenly stops.

**2** (A) 1. (✗) 2. (✓) 3. (✓)
4. (✗)

(B) The kinetic energy will increase.

**3** (A) 1. decreases. 2. nose
3. increase
4. kinetic – sound

(B) Pulling force : 2 – 6
Pushing force : 1 – 3 – 4 – 5

**4** (A) 1. Trunk. 2. Nerves.
3. Friction force.
4. hour or second

(B) speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{300}{30} = 10$ m/sec.

### Model Exam 2

**1** (A) 1. parachutes
2. kinetic
3. electrical – sound
4. light – sound

(B) Due to the pushing force of his hand against the ball that stops it.

**2** (A) 1. c 2. b 3. c
4. d

(B) Light is reflected in different directions.

**3** (A) 1. cars
2. thermal energy.
3. sharp 4. tires

(B)

| Opaque objects | Transparent objects |
|---|---|
| • Wood.<br>• Metal. | • Air. • Water.<br>• Lenses. |

**4** (A) 1. Nurse ants. 2. Gravity.
3. Needle leaves.
4. Nose.

(B) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{160}{2} = 80$ km/hr.

### Model Exam 3

**1** (A) 1. c 2. d 3. b
4. b

(B) Because the mirror has more smooth surface than the painted surface.

**2** (A) 1. (✗) 2. (✓)
3. (✓) 4. (✓)

(B) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{240}{3} = 80$ km/hr.





**3** (A) 1. Sense organs.
2. Vents or Holes.
3. Rough surface.
4. Diaphragm.

(B)

| Organisms live in deserts | Organisms live in forests |
|---|---|
| – Starred agama lizard.<br>– Fennec fox.<br>– Palm tree.<br>– Barbary fig plant. | – Panther chameleon.<br>– Kapok tree. |

**4** (A) 1. esophagus – stomach
2. trachea

(B)

| Points of comparison | Inhalation | Exhalation |
|---|---|---|
| 1. Diaphragm movement : | Downward | Upward |
| 2. Size of chest cavity : | Increases | Decreases |
| 3. The air is rich in : | Oxygen gas | Carbon dioxide gas |

### Model Exam 4

**1** (A) 1. Camouflage.
2. Nervous system.
3. Electrical energy.
4. Work.

(B) The Sun (or candle .... etc.).

**2** (A) 1. c 2. a 3. d
4. d

(B) The ecosystem still clean without pollution.

**3** (A) 1. unbalanced
2. sound
3. Kinetic energy
4. nervous system.

(B) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{200}{5} = 40$ m/sec.

**4** (A) 1. ears – brain
2. smell – movement
3. decrease.

(B)

| Points of comparison | Polar bear | Forest bear |
|---|---|---|
| 1. Habitat : | Polar habitat. | Forest habitat. |
| 2. Fur color : | White. | Black or brown. |

### Model Exam 5

**1** (A) 1. b 2. a 3. b
4. d

(B) It cannot reach to underground water in dry season, and cannot survived.

**2** (A) 1. (✓) 2. (✗) 3. (✓)
4. (✓)

(B) 1. Balanced.
2. Unbalanced.

**3** (A) 1. Fennec foxes.
2. Gravity.
3. Airbags.
4. Mangorove tree.

(B) To be away from animals that eat its leaves.

**4** (A) 1. Changing
2. pulling
3. Airbags
4. pulling force

(B) 1. nervous
2. (2) – (3) – (1)

## Model Exam 6

**1** (A) 1. b 2. d 3. b 4. a

(B) Because camouflage helps some animals hide from their predators or preys in different environments.

**2** (A) 1. (✗) 2. (✗) 3. (✗) 4. (✓)

(B) – Animals have super sight sense : Tarsier – Fishing cat.
– Animals have super hearing sense : Bat – Dolphin.

**3** (A) 1. Small intestine.
2. Countershading.
3. Energy.
4. Tongue.

(B) Speed = $\frac{Distance}{Time}$

$= \frac{150}{5} = 30$ m/sec.

**4** (A) 1. potential energy.
2. potential energy
3. kinetic energy.
4. kinetic energy

(B) 1. Figure (a)
2. Figure (b)
3. diaphragm – increases
4. carbon dioxide

## Model Exam 7

**1** (A) 1. b 2. d 3. d 4. d

(B) Some of kinetic energy is changed into thermal energy.

**2** (A) 1. penguin – polar bear.
2. electrical – light – sound.
3. energy
4. hearing – bats – dolphins.

(B) 1. c ⟶ B
2. a ⟶ D
3. d ⟶ A
4. b ⟶ C

**3** (A) 1. (✓) 2. (✗) 3. (✓) 4. (✗)

(B) Speed = $\frac{Distance}{Time} = \frac{250}{5}$

= 50 m/sec.

**4** (A) 1. Respiration process.





2. Panther chameleon.
3. Fuel.
4. Chemical energy.

(B) Because polluted air causes harm to the respiratory system.

## Model Exam 8

**1** (A) 1. (✗) 2. (✓) 3. (✓) 4. (✓)

(B) Because speed = $\frac{Distance}{Time}$

**2** (A) 1. b 2. b 3. c 4. b

(B) Speed = $\frac{Distance}{Time}$

$= \frac{220}{2} = 110$ km/hr.

**3** (A) 1. increases.
2. Water
3. stronger
5. different

(B) The nurse ants send smelly messages to scout ants that alert other ants where to find the food.

**4** (A) 1. The Moon (All items are sources of light, while the Moon reflects the light).
2. Fireflies (All items use echolocation property, while fireflies cannot use echolocation property).
3. Bull shark (All items live on land, while bull shark lives in water).
4. Flashlight (All items produce sound energy, while flashlight produces light energy).

(B) 1. parachute.
2. shockwave truck.

## Model Exam 9

**1** (A) 1. wings – code
2. (B) – (A)
3. lungs
4. airbags – seatbelts.

(B) Due to the difference in the forces that act on them.

**2** (A) 1. (✗) 2. (✓) 3. (✓) 4. (✗)

(B) Speed = $\frac{Distance}{Time}$

$= \frac{400}{20} = 20$ m/sec.

**3** (A) 1. The soldier ants.
2. Penguin.
3. Light.
4. Nervous system.

(B) They cannot communicate with each other or locate the objects around them by the sense of hearing.

4 (A) 1. d 2. d
3. c 4. c

(B)

| Types of communication | The used senses |
|---|---|
| 1. Watching TV. | - Sight and hearing. |
| 2. Flashing lights of fireflies. | - Sight. |
| 3. Echolocation in dolphins. | - Hearing. |
| 4. Using the cell phone. | - Sight and hearing. |

## Model Exam 10

1 (A) 1. c 2. a
3. d 4. c

(B) Because it transfers messages between the brain and body parts.

2 (A) 1. energy
2. bat – dolphin
3. kinetic 4. kinetic

(B) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{100}{2} = 50$ km/hr.

3 (A) 1. e 2. d 3. a
4. b 5. c

(B) It will fall down on the ground due to the pulling force of gravity.

4 (A) 1. (✓) 2. (✓) 3. (✗)
4. (✓)

(B) 1. (1), (3) 2. (4)
3. (2)





# Final Examination of Some Governorates

## Cairo Governorate

### 1 Nasr City Edu. Zone

1 1. (✗) 2. (✗) 3. (✓) 4. (✓)

2 1. the brain 2. echolocation
3. nervous 4. esophagus.

3 1. a 2. a 3. d 4. c

4 (A) Because dolphin use echolocation as it has a strong sense of hearing.

(B) Snake

### 2 Heliopolis Edu. Zone

1 1. b 2. a 3. d
4. d 5. a

2 1. (✓) 2. (✗) 3. (✗)
4. (✓) 5. (✗)

3 (A) 1. Kinetic energy.
2. Kilometer.
3. Camouflage.

(B) 1. Dogs live in cold environment have thick fur, to keep their bodies warm.
2. The Sun and a candle.

### 3 El-Sahel Edu. Zone

1 1. a 2. c 3. c
4. a 5. c

2 1. (✗) 2. (✓) 3. (✗)
4. (✓) 5. (✗)

3 (A) 1. b 2. c 3. e
4. a

(B) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{150}{10} = 15$ m/sec.

### 4 El-Zeitoun Edu. Zone

1 1. a 2. b 3. c 4. a

2 1. (✗) 2. (✗) 3. (✓) 4. (✓)

3 (A) 1. c 2. a
(B) 1. b 2. c 3. e 4. a

4 1. respiratory 2. rough.
3. structural

5 (A) using codes.

(B) Because dolphin use echolocation as it has a strong sense of hearing.

## Giza Governorate

### 5 North Giza Edu. Zone

**1**
1. carton
2. from the sensory organs to the brain.
3. consumes  4. chemical

**2** 1. a  2. d  3. c  4. b

**3** 1. (✗)  2. (✓)  3. (✓)

**4** (A) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{600}{6} = 100$ km/hr.

(B) Figure (A), because the wooden spoon is a rough surface, so it reflects light in different directions.

**5** 1. b  2. c  3. e  4. a

### 6 6th of October Edu. Zone

**1** 1. a  2. c  3. d
4. a  5. d

**2** 1. (✗)  2. (✓)  3. (✗)
4. (✓)  5. (✓)

**3** (A) 1. $\frac{\text{Distance}}{\text{Time}}$  2. gills
3. mirror.  4. The Sun

(B) Dogs live in cold environment have thick fur, to keep their body warm.

## Alexandria Governorate

### 7 El-Agamy Edu. Zone

**1** 1. c  2. a  3. c
4. a  5. c

**2** 1. (✓)  2. (✗)  3. (✓)  4. (✓)

**3** 1. b  2. c

**4** (A) 1. codes.
2. carbon dioxide

(B) 1. Figure (a).
2. Figure (b).

## El-Qualyoubia Governorate

### 8 Obour Edu. Zone

**1** 1. d  2. a  3. c  4. a
5. d  6. a  7. a

**2** 1. (✓)  2. (✗)  3. (✓)

**3** 1. c  2. a

**4** 1. Pollution  2. $\frac{\text{Distance}}{\text{Time}}$

**5** Structural adaptation.





## El-Sharkia Governorate

### 9 Al-Hessinia Edu. Zone

**1** 1. a  2. b  3. c

**2** 1. (✗)  2. (✓)  3. (✓)

**3** 1. c  2. a  3. b

**4** 1. reaction time.
2. sound  3. energy.

**5** (A) 1. Because dolphin use echolocation as it has a strong sense of hearing.
2. Gravity pulling force.

(B) To absorb a large amount of sunlight.

## El-Gharbia Governorate

### 10 El-Santa Edu. Zone

**1** 1. a  2. b  3. b

**2** 1. c  2. a  3. b

**3** 1. (✓)  2. (✗)  3. (✓)

**4** (A) Car (B) has the higher speed.

(B) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{600}{6} = 100$ km/hr.

**5** 1. Carton.  2. Eye.
3. reaction time.

## Kafr El-Sheikh Governorate

### 11 Al-Hamoul Edu. Zone

**1** 1. b  2. d  3. a
4. d  5. a

**2** 1. (✗)  2. (✓)  3. (✓)
4. (✓)  5. (✗)

**3** 1. b  2. a

**4** 1. Wood  2. Ear
3. Mangrove

## Al-Behira Governorate

### 12 Abou-Homous Edu. Zone

**1** 1. c  2. a  3. a  4. c

**2** 1. (✗)  2. (✗)  3. (✗)  4. (✓)

**3** 1. 5 km/hr.  2. Nerves.
3. Chemical energy.
4. gravity

**4** 1. b  2. c

## Beni-Suef Governorate

### 13 Beba Edu. Zone

**1** 1. d  2. c  3. a
4. a  5. d

**2** 1. (✓)  2. (✓)  3. (✗)
4. (✓)  5. (✓)

**3** 1. d 2. b 3. a
4. e 5. c

**Assiut Governorate**

**14 Assiut Edu. Zone**

**1** 1. a 2. b 3. d
4. a 5. a

**2** (A) 1. (✗) 2. (✗)
3. (✗) 4. (✓)

(B) Speed = $\frac{\text{Distance}}{\text{Time}}$

$= \frac{600}{6} = 100$ km/hr.

**3** (A) 1. d 2. a 3. b
(B) potential – kinetic.

**Sohag Governorate**

**15 Sohag Edu. Zone**

**1** 1. carton 2. work
3. ear 4. hearing sense
5. pollution 6. Teeth and tongue

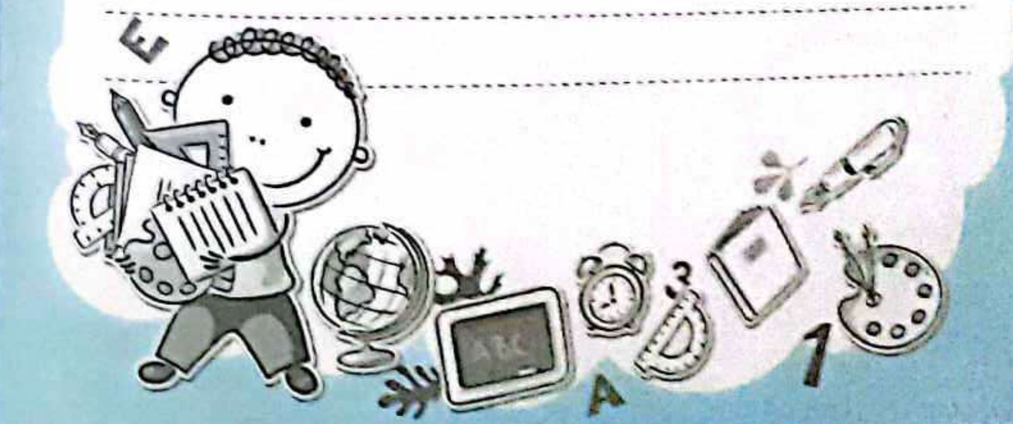
**2** 1. (✗) 2. (✓) 3. (✗)
4. (✗) 5. (✓)

**3** 1. A small car
2. Gravity pulling force.





# Notes



# Model Exam 1

## 1 Choose the correct answer:

1. In order for the human being to remain alive, there must an integration between the senses and the ........ system interact with the surrounding environment.
   a. digestive
   b. respiratory
   c. nervous
   d. circulatory

2. ........ pant to lower their body temperature.
   a. Whales
   b. Bats
   c. Lions
   d. Foxes

3. When the driver stops suddenly, all the passengers will move ........
   a. upward
   b. forward
   c. backward
   d. downward

4. Each of the following is considered a source of light, except ........
   a. the fire
   b. the sun
   c. the lamp
   d. the moon

5. Raising the thumb up and lowering it down are kinds of ........
   a. colors
   b. codes
   c. waves
   d. lights

## Put (✓) or (✗):

1. The respiratory system is responsible for the entry of air rich in oxygen gas into the body. (
2. Foxes have a strong sense of hearing. (
3. The moon is a source of light. (

4. Red and green traffic lights are codes. ( )
5. The driver should drive as fast as possible to avoid accidents. ( )

**3 Calculate the speed of a train that covers 600 km in a time of 6 hours.**

.................................................................................................................

.................................................................................................................

.................................................................................................................

**4 Which of the following surfaces represents the reflection of light rays from a wooden spoon and why?**

(A) (B)

.................................................................................................................

.................................................................................................................

.................................................................................................................

# Model Exam 2

## Choose the correct answer:

1. ............ energy affects the sensory receptors in the eye causing vision.
   a. Sound  b. Kinetic
   c. Light  d. Magnetic

2. The eye sends messages to the ............ through the nerves
   a. spinal cord  b. heart
   c. lungs  d. brain

3. ............ cover(s) body of an Arctic fox.
   a. Thick fur  b. Heavy hair
   c. Heavy skin  d. Many feathers

4. Animals can communicate with each other by ............ .
   a. talking  b. sound
   c. writing  d. reading

5. Moving a box away from you represents ............ force.
   a. magnetic  b. gravitational
   c. pulling  d. pushing

## Put (✓) or (✗):

1. The feet of a penguin do not freeze because they have a layer of fat. (  )
2. Bats use their sense of hearing to avoid danger. (
3. Wood is a transparent object that allows light to pass through. (
4. Bees can know the sweet taste by their sense of smell. (
5. The airbag deflates at the same speed as it is inflated. (

**3** If the two cars moved at the same time for 20 seconds, car (A) covered a distance of 200 meters, while car (B) covered a distance of 300 meters. Which of the two cars has a higher speed?

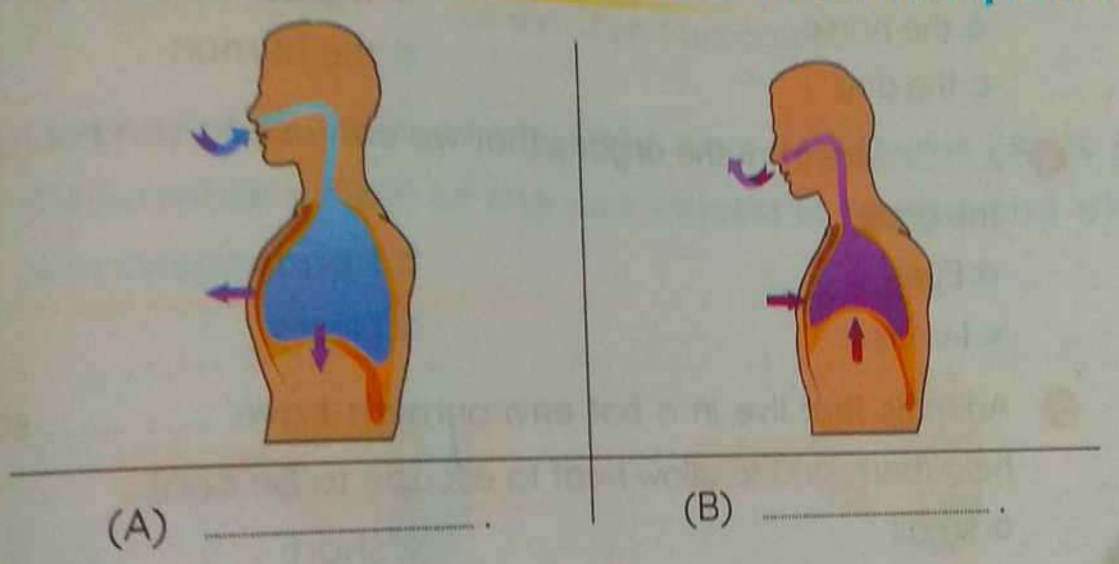
............................................................

............................................................

............................................................

............................................................

**4** Label the following two processes, then answer the questions:



(A) .................... . (B) .................... .

1. What happens to the diaphragm in figure (A)?

............................................................

2. What happens to the chest size in figure (B)?

............................................................

# Model Exam 3

## 1 Choose the correct answer:

1. The skin is an important organ of the ________ system.
   a. digestive
   b. nervous
   c. respiratory
   d. circulatory

2. The pushing and pulling forces are different in ________.
   a. mass
   b. color
   c. direction
   d. energy

3. There is a tapetum lucidum in all of the following, except ________
   a. the horse
   b. the cat
   c. the dog
   d. the human

4. ________ are from the organs that we can use to send or rece the code.
   a. Eyes
   b. Hearts
   c. Lungs
   d. Livers

5. Animals that live in a hot environment have ________ ears help them, and to allow heat to escape to be cool.
   a. small
   b. short
   c. long
   d. sharp

## Put (✓) or (✗):

1. During running and making an effort, the number of breathin times decreases. (

2. Dolphins have a strong sense of hearing. (

3. Humans have a tapetum lucidum in their eyes to help them see at night. (

4. Speed is the distance covered by an object multiplied by the time taken. ( )

5. The seatbelt is used to decrease the speed of the driver when he/she moves forward. ( )

## 3 Study the following figure, then choose the correct word:

(faster - slower - increases - decreases - remains constant)

a. By using a smaller ball on the same ramp, the object's speed ........ as the object becomes ........

b. By increasing the number of books, the object's speed ........ as the object becomes ........ .

## 4 Look at the path of the light rays in pictures (A) & (B). Determine which of the two objects is opaque and which is transparent:

A ........................ .

B ........................ .





# Model Exam 4

## 1 Choose the correct answer:

1. Fish extract oxygen out of the water using their ............

   a. skin  b. gills
   c. lungs  d. fins

2. Which of the following allows light to pass through it?

   a. A rock  b. The moon
   c. Wood  d. Glass

3. ............ make the airbag inflate and fill with gas to pro[vide] a soft cushion.

   a. Brakes
   b. Gas pedals
   c. Sensors
   d. Speedometers

4. Honeybees and humans are similar in communication throu[gh] ............ .

   a. sound  b. smell
   c. light  d. movements

5. When you put your hand on a hot surface, the brain sends message to the muscles and the action that comes from y[ou] immediately after it is to ............ .

   a. keep placing your hand
   b. feel pain
   c. pull your hand away from the hot object
   d. do nothing

**Put (✓) or (✗):**

1. The migration of birds to search for food is considered a form of structural adaptation. ( )
2. Nocturnal animals have eyes that are larger than the humans' eyes. ( )
3. If I can see my face clearly on a surface, this means that it is a smooth, shiny surface. ( )
4. A static object has no kinetic energy until unbalanced forces act on it. ( )
5. The apple on the ground has no energy. ( )

**A yellow car moves 10 meters in 5 seconds**
**A green car moves 20 meters in 5 seconds**
**What are the speeds of the two cars and which car is faster?**

.......................................................................

.......................................................................

.......................................................................

**Which of the following figures represents the correct vision in humans?**

Figure (1)

Figure (2)

# Model Exam 5

## 1 Choose the correct answer:

1. The echo sound feature depends on the ________.
   - a. sight sense
   - b. hearing sense
   - c. taste sense
   - d. touch sense

2. A static ball on the ________ has no energy.
   - a. ramp
   - b. table
   - c. ground
   - d. chair

3. A surface that reflects light rays in the same direction is ____
   - a. smooth and shiny
   - b. dark with impurities
   - c. transparent and clean
   - d. rough and dark

4. Humpback whales use singing for________.
   - a. heating
   - b. hiding from enemies
   - c. communication
   - d. having fun

5. Adaptation includes changes that ________ in the environme
   - a. reduce chances of survival
   - b. improve species survival
   - c. reduce life span for individuals
   - d. reduce reproduction process

## Put (✓) or (✗):

1. Plants have two types of adaptation, structural and behavio (

2. Animals can use more than one sense to communicate with each other. (

3. All nocturnal animals need a source of light to see. (

4. A static object at the top of a ramp has no kinetic energy. ( )
5. Force affects an object and changes work into energy. ( )

## 3 From the following figure, calculate the speed of the solar vehicle:

00:20

Time: 20 seconds

1200 meters

.......................................................................................

.......................................................................................

.......................................................................................

## 4 Classify the following words in the table:

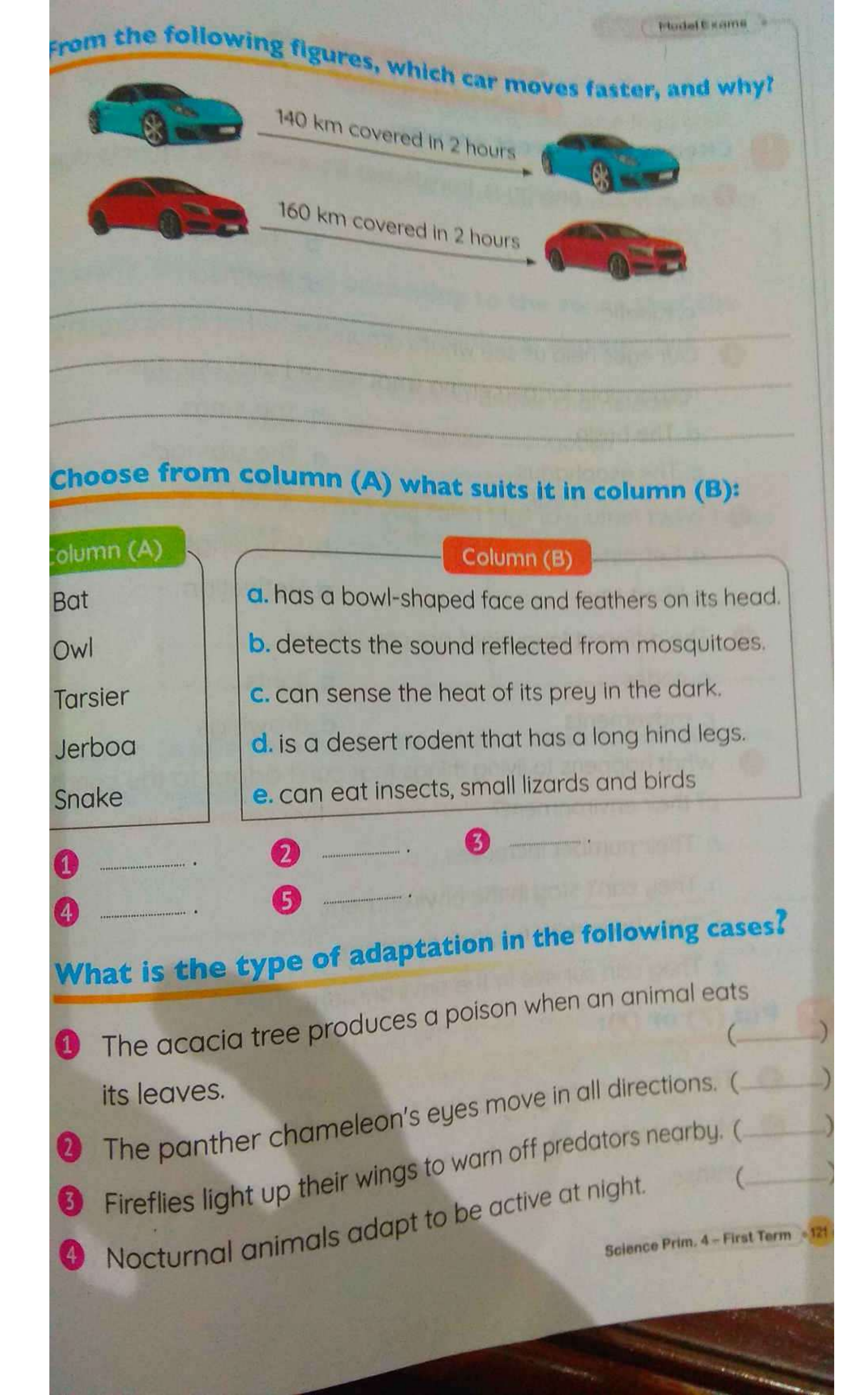
Lungs – Tongue – Nose – Anus – Brain – Alveoli – Liver – Nerves – Stomach – Spinal cord – Small intestine

| Digestive System | Respiratory System | Nervous System |
| --- | --- | --- |
| ............ | ............ | ............ |
| ............ | ............ | ............ |
| ............ | ............ | ............ |
| ............ | ............ | ............ |

# Model Exam 6

## 1 Choose the correct answer:

1. The dolphin can locate its prey through its sense of ______
   a. smell
   b. hearing
   c. sight
   d. taste
2. Which of the following is a source of light?
   a. The eye
   b. The moon
   c. Fire
   d. A mirror
3. Animals can communicate with each other through ______
   a. sounds and lights
   b. talking
   c. reading
   d. writing
4. The stomach is a part of the digestive system that ______
   a. chews food
   b. converts solid food into liquid
   c. absorbs nutrients from food
   d. delivers food into the esophagus
5. In the tug-of-war game, the two teams ______.
   a. push the rope in the same direction
   b. pull the rope in opposite directions
   c. push the rope in opposite directions
   d. pull the rope in the same direction





From the following figures, which car moves faster, and why?



.................................................................

.................................................................

.................................................................

Choose from column (A) what suits it in column (B):

| Column (A) | Column (B) |
|---|---|
| Bat | a. has a bowl-shaped face and feathers on its head. |
| Owl | b. detects the sound reflected from mosquitoes. |
| Tarsier | c. can sense the heat of its prey in the dark. |
| Jerboa | d. is a desert rodent that has a long hind legs. |
| Snake | e. can eat insects, small lizards and birds |

1 ............ . 2 ............ . 3 ............ .

4 ............ . 5 ............ .

What is the type of adaptation in the following cases?

1 The acacia tree produces a poison when an animal eats its leaves. (............)

2 The panther chameleon's eyes move in all directions. (............)

3 Fireflies light up their wings to warn off predators nearby. (............)

4 Nocturnal animals adapt to be active at night. (............)

# Model Exam 7

## 1 Choose the correct answer:

1. ________ energy is transferred between two objects during collision.

   a. Sound b. Thermal

   c. Kinetic d. Electrical

2. Our eyes help us see what's around us. What is the organ that responsible for perceiving what we see with our eyes?

   a. The brain b. The lungs

   c. The esophagus d. The stomach

3. What feature of light helps you see yourself in the mirror?

   a. Refraction b. Ray length

   c. Short rays d. Reflection

4. The different languages are considered ________ .

   a. codes b. lights

   c. movements d. drawings

5. What happens to living things that can't adapt to the conditions of their environment?

   a. Their number increases.

   b. They can't stay in the environment.

   c. They keep their number constant.

   d. They can survive in the environment.

## Put (✓) or (X):

1. The acacia trees grow in the Amazon forest. (

2. Morse code can be detected by sight sense or hearing sense. (

3. Some animals can see at night, such as a wild cat. (   )
4. Codes are very useful for bees and ants because they can't talk like humans. (   )
5. Distance covered by an object can be measured in meters or kilograms. (   )

## 3 Classify the following according to the sense that the living organism uses to communicate and survive:

Dolphins - Snakes - Bees - Panther chameleon - Ants - Bats - Egyptian mongoose

| Movement | Hearing Sense | Smell Sense | Touch Sense | Taste Sense |
|---|---|---|---|---|
| ........ | ........ | ........ | ........ | ........ |
| ........ | ........ | ........ | ........ | ........ |

## 4 A train takes five hours to cover a distance of 200 km. Find its speed.

..............................................................................

..............................................................................

..............................................................................

# Model Exam 8

## 1 Choose the correct answer:

1. Humpback whales communicate with each other through the sense of ........ .
   a. sight
   b. hearing
   c. smell
   d. touch

2. An object's mass affects its ........ .
   a. potential energy only
   b. kinetic energy only
   c. both kinetic and potential energies
   d. neither kinetic nor potential energies

3. The roots of the palm plants help them to ........ .
   a. stand strong against the wind
   b. reach the underground soil
   c. fix the plants in the soil
   d. all the previous

4. The ........ is an animal that can escape from enemies because of the length of its hind legs.
   a. Arctic fox
   b. jerboa
   c. penguin
   d. panther chameleon

Adel wanted to make a suitable box through which he could see what was inside without having to open it. What material should be used?

a. Wood
b. A mirror
c. Carton
d. Glass

## 2 Put (✓) or (X):

1. Man cannot restore the ecosystem in any way. ( )
2. Food turns from complex to simple during digestion. ( )
3. The brain translates the code after receiving it. ( )
4. The object that takes the longest time on the ramp has the biggest mass. ( )
5. Moving an object toward you is considered a pushing force. ( )

## 3 Classify the following words in the table:

Mirror – Wood – Glass – Metal – Plastic

| Shiny Surfaces | Rough Surfaces | Transparent Surfaces |
|---|---|---|
| ........ | ........ | ........ |
| ........ | ........ | ........ |
| ........ | ........ | ........ |

## 4 Choose from column (A) what suits it in both columns (B) & (C):

| Column (A) | Column (B) | Column (C) |
|---|---|---|
| **Living Organisms** | **Way of Communication** | **Depend on** |
| 1 Humans | a. use echolocation. | a. light energy only. |
| 2 Fireflies | b. use Morse code. | b. sound energy only. |
| 3 Bats | c. flash their wings. | c. sound and light energies |

1 ........ . 2 ........ . 3 ........ .

# Model Exam 9

## 1 Choose the correct answer:

1. The rope in the tug-of-war game moves when the forces acting on it are ________ .
   a. equal
   b. balanced
   c. unbalanced
   d. equal zero
2. Which of these is an example of camouflage?
   a. Camel's broad feet
   b. Camel's hump
   c. Powerful parrot wings
   d. The fox is golden like its environment.
3. Traffic lights depend on the sense of sight in communication as ________ .
   a. fireflies
   b. dolphins
   c. ants
   d. bats
4. When light is reflected off a surface in different directions, this surface is ________ .
   a. transparent
   b. smooth
   c. rough
   d. opaque
5. Sameh drives his bike, and while he hears a car behind him, he turns away so as not to hit it. The system that received a signal making Sameh realize that is ________ .
   a. the nervous system
   b. the respiratory system
   c. the digestive system
   d. the circulatory system

## ut (✓) or (✗):

The fur that some animals possess to protect them from the cold is a behavioral adaptation. ( )

2. The brain is responsible for processing information. ( )
3. The goalkeeper catches the ball by the pushing force of his hands. ( )
4. Humpback whales change their sound pitch according to the seasons. ( )
5. The object that covers the same distance in a longer time, its speed increases ( )

## 3 Choose from column (A) what suits it in column (B):

| Column (A) | Column (B) |
|---|---|
| 1. Light | a. depends on the body's sense of heat for predation. |
| 2. An owl | b. depends on the echo of the sound in locating the prey. |
| 3. A snake | c. is an animal with a bowl-shaped face. |
| 4. A bat | d. it is the visible form of energy that is transmitted in the form of waves. |
| 5. Mirror-like membrane | e. a structural adaptation in the eye that provides some animals with better vision at night |
| | f. a sense that helps us hear birds. |

1. ______ . 2. ______ . 3. ______ .
4. ______ . 5. ______ .

## 4 Study the following figure, then answer the questions:

1. What does the following figure represent? ______
2. Does this system exist in humans only? ______
3. Label the following:
   1. ______
   2. ______
   3. ______

# Model Exam 10

## 1 Choose the correct answer:

1. One of the adaptations that help an animal protect itself from enemies is ............ .
   a. blending in  b. extinction
   c. immigration  d. reproduction
2. ............ is from the opaque objects.
   a. Glass  b. Carton
   c. Plastic  d. Air
3. The ............ system helps us to translate messages that come from our surroundings, such as smells and sounds.
   a. respiratory  b. digestive
   c. circulatory  d. nervous
4. Sending smelly messages when there is a shortage of food is the function of ............ .
   a. queen ants  b. nurse ants
   c. scout ants  d. solider ants
5. To calculate the speed of the runner, we use the rule: ............
   a. Speed = distance – time  b. Speed = distance × time
   c. Speed = distance ÷ time  d. Speed = distance + time

## Put (✓) or (✗):

1. Some animals that live in the cold have long ears to help them to maintain their body temperature. (  )
2. The nervous system works separately from the five senses. (  )

3. Gravitational force is an upwards pulling force. ( )
4. The sun is a natural source of light. ( )
5. When you kick a ball, kinetic energy is produced. ( )

**Choose from column (A) what suits it in column (B):**

| Column (A) | Column (B) |
| --- | --- |
| 1. The spinal cord | a. it is similar in its processing of information to a computer. |
| 2. Using the sense of sight | b. when a foreign object is brought into your eyes. |
| 3. The brain | c. when an object falls from your hands. |
| 4. The reflex occurs | d. the transmission of commands to the muscles to contract. |

1 ______ . 2 ______ . 3 ______ . 4 ______ .

**Omar rode his bike 15 kilometers in 3 hours, how fast was he going? Rashida rode her bike 30 kilometers in 2 hours, how fast was she going? Which rider is the fastest? And why?**

______________________________

______________________________

______________________________

# Model Exam 11

## Choose the correct answer:

1. Cats' eyes are adapted to night vision due to the presence of the .............. behind their eyes.
   a. wide eyes
   b. eye pupil
   c. tapetum lucidum
   d. eye lens

2. Kinetic energy is the energy gained by an object due to its ......
   a. position
   b. shape
   c. motion
   d. size

3. What carries the message from your eyes to your brain when you see something?
   a. Nerves
   b. Muscles
   c. Veins
   d. Glands

4. A blind person's cane and .............. emit high-pitched sounds that bounce off form echo.
   a. lizards
   b. bats
   c. bull sharks
   d. polar bears

5. What is adaptation?
   a. The process by which new species appear.
   b. A form of pollination for trees.
   c. A feature owned by living things to help them survive.
   d. A process of getting rid of harmful substances in living things

## Put (✓) or (✗):

1. Animals digging trenches is a form of structural adaptation. ( )
2. Reflex is the time taken for the body to receive information from the environment. ( )
3. All objects around us move at different speeds. ( )
4. Long beeps in Morse code are represented by dots. ( )
5. Food stays in the stomach for a few minutes. ( )

## Complete using the following words:

(Penguins - Owls - Bats - Bull Sharks - Fennec foxes - Polar foxes - Panther chameleons)

1. .......... pant to lower their bodies temperature.
2. .......... are from the nocturnal animals that have poor night vision.
3. .......... have the ability to rotate their heads in all directions, and it is called super sensory adaptation.
4. .......... can sneak up on its prey using countershading.

## Arrange the following steps that represent the vision process:

(..........) Brain translates these signals.
(..........) Eye pupils allow the light to enter the eyes.
(..........) Light falls on objects.
(..........) Sensory receptors at the back of the eyes send signals to the brain.
(..........) Light reflects on the eyes.

# Model Exam 12

## Choose the correct answer:

1. ............ is the force that attracts objects toward Earth's surface.
   a. Magnetic energy b. Electrical energy
   c. Friction force d. Gravity
2. The light-reflecting materials include ............ .
   a. wood b. mirrors
   c. plastic d. paper
3. To communicate through the sense of sight, we need ............ .
   a. to make sound b. light
   c. to hear music d. to touch something
4. The eagle is a bird that eats the meat of its prey. Its beak is strong and sharp. This structural adaptation helps it to ............ .
   a. see b. find a shelter
   c. rip meat d. escape
5. Songs of humpback whales in winter are characterized by ...... .
   a. high-pitched sounds
   b. low-pitched sounds
   c. rough sounds
   d. weak sounds

## ...ut (✓) or (✗):

Bats use light as a means of communication with each other. ( )

The spinal cord is an important organ of the digestive system. ( )

Fish have gills to expel oxygen underwater. ( )

4. When a moving bike hits a man, he may be injured only and survive. ( )

5. Digestion of food begins in the mouth. ( )

## Choose from column (A) what suits it in column (B):

**Column (A)**

1. Carbon dioxide
2. Diaphragm
3. Throat (pharynx)
4. Oxygen

**Column (B)**

a. is a common organ in the digestive and respiratory systems.
b. is a gas necessary for respiration.
c. is a muscle that has an important role in the breathing process.
d. is a gas produced by respiration.

1 .......... . 2 .......... . 3 .......... . 4 .......... .

## Study the following table, then complete:

| | Car (A) | Car (B) | Car (C) |
|---|---|---|---|
| Distance (Meters) | 200 | 200 | 100 |
| Time (Seconds) | 4 | 2 | 2 |

..........................................................................................

..........................................................................................

..........................................................................................

a. Car (..........) is the fastest one.

b. Cars (..........) and (..........) move with the same speed.

# Model Exam 13

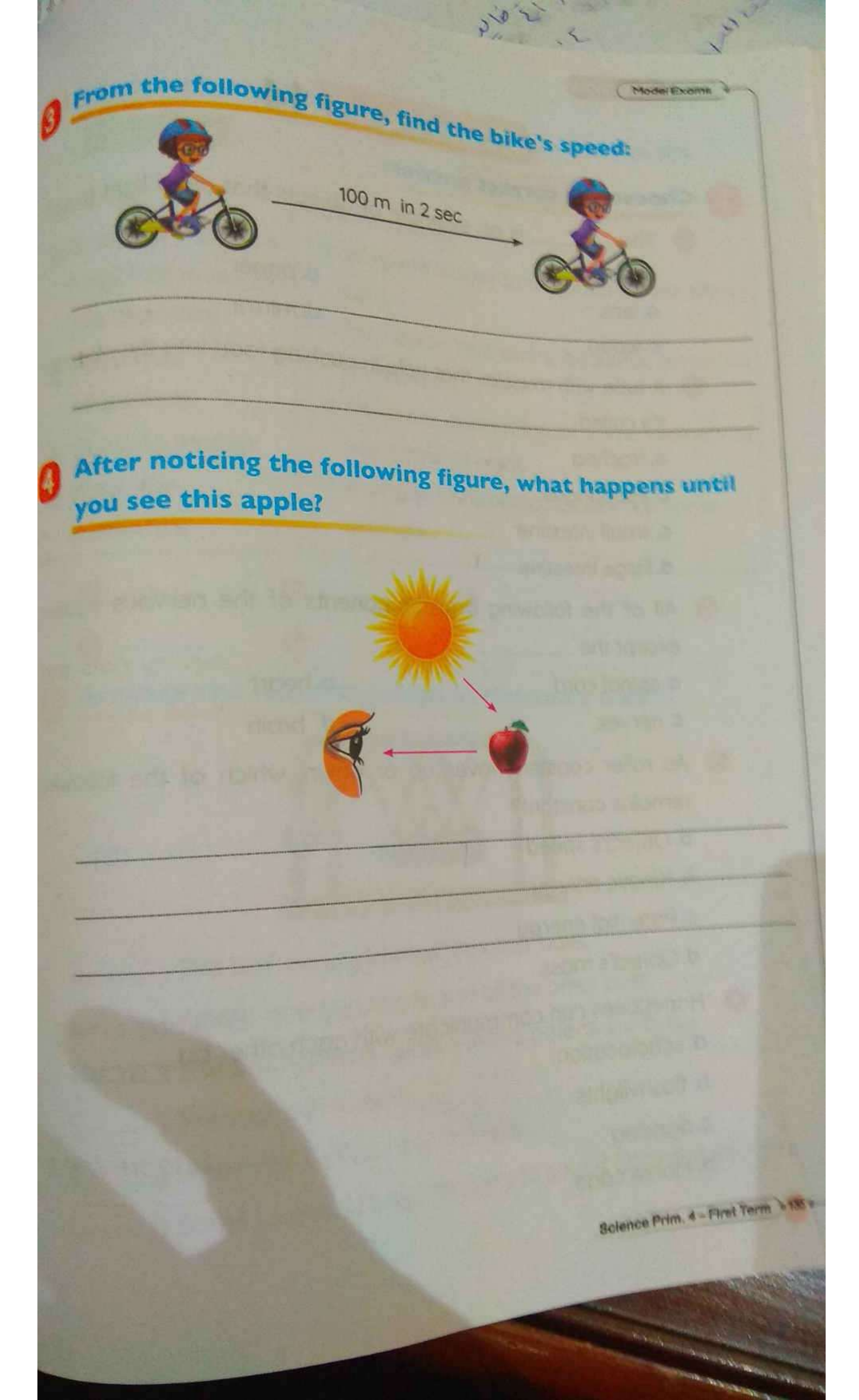
## Choose the correct answer:

1. ________ mix(es) and grind(s) food inside the mouth.
   - a. Teeth only
   - b. Tongue only
   - c. Saliva only
   - d. Teeth and tongue
2. As the angle of the inclined ramp decreases, the object's speed ________
   - a. increases
   - b. decreases
   - c. remains constant
   - d. becomes zero
3. When light falls on a dark surface, ________ .
   - a. the surface absorbs the light
   - b. light passes through it
   - c. the light is refracted
   - d. nothing happens
4. The bat is considered a ________ animal.
   - a. nocturnal
   - b. morning
   - c. harmful
   - d. non-flying
5. Morse code consists of ________ beeps known as dots and ________ beeps known as dashes.
   - a. short - short
   - b. long - long
   - c. short - long
   - d. long - short

## Choose from column (A) what suits it in column (B):

| Column (A) | Column (B) |
|---|---|
| ght | a. it does not absorb food. |
| amouflage | b. a type of adaptation that helps animals to hide. |
| ophagus | c. ants use it to sense and communicate smells. |
| aphragm | d. it helps us see. |
| nell | e. a muscle that plays an important role in breathing. |

________ , 2 ________ , 3 ________ , 4 ________ , 5 ________



## 3 From the following figure, find the bike's speed:



## 4 After noticing the following figure, what happens until you see this apple?

# Model Exam 14

## Choose the correct answer:

1. The ______ is an example of objects that allow light to pass through.
   - a. lens
   - b. paper
   - c. wood
   - d. mirror

2. A tube with muscles that help in pushing food into the stomach it's called ______.
   - a. trachea
   - b. esophagus
   - c. small intestine
   - d. large intestine

3. All of the following are components of the nervous system except the ______.
   - a. spinal cord
   - b. heart
   - c. nerves
   - d. brain

As roller coaster moves up or down, which of the following remains constant?

- a. Object's speed
- b. Kinetic energy
- c. Potential energy
- d. Object's mass

Honeybees can communicate with each other by ______.

- a. echolocation
- b. flashvlights
- dancing
- Morse code

## 2 Choose from column (A) what suits it in column (B):

| Column (A) | Column (B) |
|---|---|
| 1 Nerves | a. bronchioles |
| 2 Branches inside the lungs that resemble tree branches | b. carry messages to the brain via the spinal cord. |
| 3 Behavioral adaptation | c. the kapok tree emits beautiful scents to attract bats. |
| 4 Vibrating motion | d. structural adaptation of some animals to see better at night. |
| 5 Mirror-like membrane | e. a way to communicate between some animals |

1 ________ . 2 ________ . 3 ________ .

4 ________ . 5 ________ .

## Arrange the following steps in Newton's cradle:

(______) The ball moves toward the other balls.

(______) Kinetic energy transfers to all the other balls.

(______) The ball is raised up so it stores potential energy.

(______) The last ball moves.

(______) When the ball hits the first ball.

(______) Some kinetic energy changes to sound and heat energies.

# Model Exam 15

**hoose the correct answer:**

We can say an object is in a state of motion when its ________ changes.

a. shape

b. size

c. color

d. position

When your eyes see a red traffic light, it sends a signal to you to ________ .

a. increase the speed

b. decrease the speed

c. keep your speed

d. start moving

________ puff up (blow) their bodies with the air to scare their enemies.

a. Bull sharks

b. Panther chameleons

c. Snakes

d. Jerboas

When light strikes an opaque object, ________ .

a. light reflects

b. light refracts

c. shadow is formed

d. light passes through it

________ have the ability to turn their heads in all directions.

a. Snakes

b. Jerboas

c. Dolphins

d. Owls

## 2 Choose from column (A) what suits it in column (B):

| Column (A) | Column (B) |
| --- | --- |
| 1 Kilometer | a. it is the change in an object's position. |
| 2 Respiration | b. it is the visible form of energy that is transmitted in the form of waves. |
| 3 Energy | c. the force that pulls things downwards. |
| 4 Gravity | d. the process of pushing air in and out of the body. |
| 5 Motion | e. a measuring unit for long distances |
| 6 Light | f. it is the ability to do work |

1 ........ . 2 ........ . 3 ........ .

4 ........ . 5 ........ . 6 ........ .

## 3 Answer the following questions:

1 A dolphin can locate living organisms and things under the surface of the water. Explain the feature that helps the dolphin to do so.

..............................................................................................

..............................................................................................

2 There are some nocturnal animals that depend on their sharp senses to get their prey, give examples.

..............................................................................................

..............................................................................................

3 Snakes depend on identifying their prey and catching them at night by sensing heat. Determine the reason.

..............................................................................................

..............................................................................................

# Model Exams

## Model Exam 1

**1 Choose the correct answer:**

1 c 2 d 3 b 4 d 5 b

**2 Put (✓) or (✗):**

1 ✓ 2 ✓ 3 ✗ 4 ✓ 5 ✗

**3** Speed = distance ÷ time = 600 ÷ 6
= 100 km/hr.

**4 Which of the following surfaces represents the reflection of light rays from a wooden spoon and why?**

(B), because light rays reflect in different directions when they fall on a rough surface.

## Model Exam 2

**1 Choose the correct answer:**

1 c 2 d 3 a 4 b 5 d

**2 Put (✓) or (✗):**

1 ✗ 2 ✓ 3 ✗ 4 ✗ 5 ✓

**3** Car (B) has higher speed because it covers a longer distance at the same time.

**4 Label the following two processes, then answer the questions:**

(A): inhalation (B): exhalation

1 It contracts and moves down.

2 It decreases.

## Model Exam 3

**1 Choose the correct answer:**

1 b 2 c 3 d 4 a 5 c

**2 Put (✓) or (✗):**

1 ✗ 2 ✓ 3 ✗ 4 ✗ 5 ✗

**3 Study the following figure, then choose the correct word:**

(a) decreases - slower

(b) increases - faster

**4** A Transparent B Opaque

## Model Exam 4

**1 Choose the correct answer:**

1 b 2 d 3 c 4 d 5 c

**2 Put (✓) or (✗):**

1 ✗ 2 ✓ 3 ✓ 4 ✓ 5 ✗

**3** Speed of the yellow car
= distance ÷ time = 10 ÷ 5 = 2 m/sec

Speed of the green car = distance ÷ time
= 20 ÷ 5 = 4 m/sec.

The green car is faster.

**4** Figure (2)

## Model Exam 5

**1 Choose the correct answer:**

1 b 2 c 3 a 4 c 5 b

**2 Put (✓) or (✗):**

1 ✓ 2 ✓ 3 ✗ 4 ✓ 5 ✗

**3** Speed = distance ÷ time

= 1200 ÷ 20 = 60 m/sec

**4 Classify the following words in the table:**

| Digestive System | Nervous System | Respiratory System |
|---|---|---|
| - Tongue<br>- Anus<br>- Liver<br>- Stomach<br>- Small Intestine | - Brain<br>- Spinal cord<br>- Nerves | - Lungs<br>- Nose<br>- Alveoli |

## Model Exam 6

**1 Choose the correct answer:**

1 b 2 c 3 a 4 b 5 b

**2** The red car faster because it covers longer distance at the same time.

**3 Choose from column (A) what suits it in column (B):**

1 b 2 a 3 e 4 d 5 c

**4 What is the types of adaptation in the following cases?**

1 Behavioral 2 Structural

3 Structural 4 Behavioral

## Model Exam 7

**1 Choose the correct answer:**

1 c 2 a 3 d 4 a 5 b

**2 Put (✓) or (✗):**

1 ✗ 2 ✓ 3 ✓ 4 ✓ 5 ✗

**3 Classify the following according to the sense that the living organism uses to communicate and survive:**

| Movement | Hearing Sense | Smell Sense | Touch Sense | Taste Sense |
|---|---|---|---|---|
| Bees | -Dolphins<br>-Bats<br>-Egyptian mongooses | Ants | Snakes | Panther chameleon |

**4** Speed = distance ÷ time = 200 ÷ 5

= 40 km/hr

## Model Exam 8

**1 Choose the correct answer:**

1 b 2 c 3 d 4 b 5 a

**2 Put (✓) or (✗):**

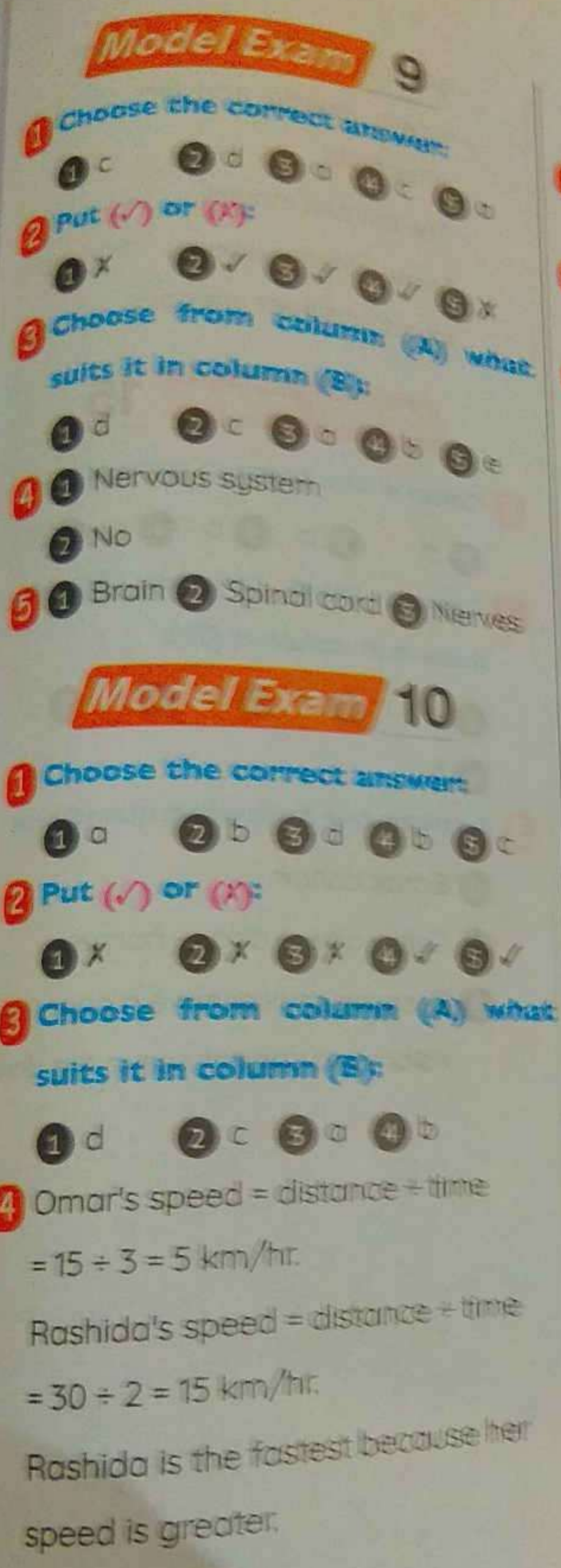
1 ✗ 2 ✓ 3 ✓ 4 ✗ 5 ✗

**3 Classify the following words in the table:**

| Shiny Surfaces | Rough Surfaces | Transparent Surfaces |
|---|---|---|
| Mirror<br>Metal | Wood | Glass<br>Plastic |

**4 Choose from column (A) what suits it in both columns (B) & (C):**

1 b-c 2 c-a 3 [illegible]



## Model Exam 9

**1 Choose the correct answer:**

1 c   2 d   3 a   4 c   5 c

**2 Put (✓) or (✗):**

1 ✗   2 ✓   3 ✓   4 ✓   5 ✗

**3 Choose from column (A) what suits it in column (B):**

1 d   2 c   3 a   4 b   5 e

**4** 1 Nervous system

2 No

**5** 1 Brain   2 Spinal cord   3 Nerves

## Model Exam 10

**1 Choose the correct answer:**

1 a   2 b   3 d   4 b   5 c

**2 Put (✓) or (✗):**

1 ✗   2 ✗   3 ✗   4 ✓   5 ✓

**3 Choose from column (A) what suits it in column (B):**

1 d   2 c   3 a   4 b

**4** Omar's speed = distance ÷ time

= 15 ÷ 3 = 5 km/hr.

Rashida's speed = distance ÷ time

= 30 ÷ 2 = 15 km/hr.

Rashida is the fastest because her speed is greater.

## Model Exam 11

**1 Choose the correct answer:**

1 c   2 c   3 a   4 b   5 c

**2 Put (✓) or (✗):**

1 ✗   2 ✗   3 ✓   4 ✗   5 ✗

**3 Complete using the following words:**

1 Fennec foxes   2 Bats

3 Owls   4 Bull sharks

**4 Arrange the following steps:**

- Light falls on objects.
- Light reflects on the eyes.
- Eye pupils allow the light to enter the eyes.
- Sensory receptors at the back of the eyes send signals to brain.
- Brain translates these signals.

## Model Exam 12

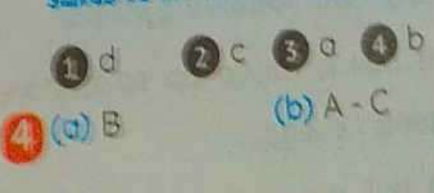
**1 Choose the correct answer:**

1 d   2 b   3 b   4 c   5 a

**2 Put (✓) or (✗):**

1 ✗   2 ✗   3 ✗   4 ✓   5 ✓

**3 Choose from column (A) what suits it in column (B):**



1 d   2 c   3 a   4 b

**4** (a) B   (b) A - C

## Model Exam 13

**1 Choose the correct answer:**

1 d 2 b 3 a 4 a 5 c

**2 Choose from column (A) what suits it in column (B):**

1 d 2 b 3 a 4 e 5 c

**3** Speed = distance ÷ time

= 100 ÷ 2 = 50 m/sec.

**4** - Light falls on the apple.

- Light reflects from the apple to the eye.
- Light enters the eye through the pupils.
- The sensory receptors of the eyes send signals to the brain to translate them.
- The brain translates and processes this information.

## Model Exam 14

**1 Choose the correct answer:**

1 a 2 b 3 b 4 d 5 c

**2 Choose from column (A) what suits it in column (B):**

1 b 2 a 3 c 4 e 5 d

**3 Arrange the following steps:**

- The ball is raised up so it stores potential energy.
- The ball moves toward the other balls.
- When the ball hits the first ball.
- Kinetic energy transfers to all the other balls.
- The last ball moves.
- Some kinetic energy changes to sound and heat energies.

## Model Exam 15

**1 Choose the correct answer:**

1 d 2 b 3 b 4 c 5 d

**2 Choose from column (A) what suits it in column (B):**

1 e 2 d 3 f 4 c 5 a 6 b

**3 Answer the following questions:**

1 Echolocation

2 Cats - deer - dogs - horses

3 Because snakes have a poor night vision and cannot see in the dark

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## 1. Choose the correct answer:

① An animal that has the ability to turn the head in all directions is ......................

a. Snake b. Jerboa c. dolphin d. owl

② The ability to do work is ...............

a. Energy b. Force c. Push d. Pull

③ Animals can communicate with each other through ...............

a. Sounds and lights b. talking c. reading d. writing

④ One of the light reflecting materials is .....................

a. wood b. mirrors c. plastic d. paper

⑤ The force that allows down or decreases the speed of an object is ...............

a. push b. gravity c. friction d. pull

## 2. Put (√ ) or (X):

① The food passes through the large intestine before it goes into the small intestine. ( )

② Energy is neither destroyed nor created from nothing. ( )

③ Wood is a transparent object that allows light to pass through it. ( )

④ The respiratory system is responsible for the entry of air into the body. ( )



## 3.Match:

| (A) | (B) |
|---|---|
| 1)Camouflage | a)The force that pulls things downwards. |
| 2)Vibrating motion | b) A type of adaptation that helps an animal to hide. |
| 3)Gravity | c) Carry messages to the brain via spinal cord. |
| 4)Nerves | d) A way to communicate between some animals. |

# Governorates Exams 2o21- 2022 – Exam (2)

## 1. Choose the correct answer:

① Raising the thumb up or lowering it down is a kind of ……………………

a. colors　b. codes　c. waves　d. lights

② one of the behavioral adaptations that help the animal protects itself from enemies is …………….

a. camouflage　b. extinction　c. immigration　d. reproduction

③ ……………. Is covering the body of arctic fox.

a. Heavy hair　b. Thick fur　c. heavy skin　d. many feathers

④ The ability to do work is …………….

a. Energy　b. Force　c. Push　d. Pull

⑤ The force that pulls the objects down toward the center of the Earth is ……………… force

a. pushing　b. gravity　c. pulling　d. wind

## 2. Put (√ ) or (X):

① The ear is the sense organ which is responsible for seeing objects. (　)

② The moon is a source of light. (　)

③ Exhaled air carries oxygen. (　)

④ When the static body is affected by balanced forces, the body moves. (　)

⑤ When you kick a ball, kinetic energy is produced. (　)



## 3.Match:

| (A) | (B) |
|---|---|
| 1) Motion | a) A muscle that has an important role in the respiration process. |
| 2) Structural adaptation | b) The change in the position of an object with respect to a fixed point. |
| 3) Diaphragm | c) A structural adaptation whose function is similar to the lung. |
| 4) Gills | d) the flat teeth in some animals to feed a type of food like grass. |

# Governorates Exams 2o21- 2022 – Exam (3)

## 1.Choose the correct answer:

① All of the following are components of the nervous system except............

a. Spinal cord b. Nerve s c. Brain d. Heart

② Animals can communicate with each other through..........................

a. Sounds and lights b. Talk c. Writing d. -Reading

③............... Is covering the body of arctic fox

- Heavy hair b. Thick fur c. heavy skin d. many feathers

④To communicate through the sense of sight we need..........

a. Making sound b. Availability of light c-Hearing music d-Touching something

⑤When you put your hand on a hot surface, the brain sends a message to the muscles and the action that comes from you immediately after it is to......................

a. Keep placing your hand b. You will do nothing

c. You feel pain d. Pull your hand away from a hot object

## 2. Put (√ ) or (X):

①The food changes from complex form to simple form through digestion process. ( )

② Dolphins have strong sense of sight ( )

③ Tongue is an organ of sight. ( )

④When balanced forces are applies on an object at rest, it will body move. ( )

⑤The type of adaptation in the fishing cat's eyes is a behavioral adaptation. ( )

## 3.Match:

| (A) | (B) |
|---|---|
| **a.** it depends on the body's sense of heat for predation | 1. Light |
| **b.** b-It depends on the echo of the sound in locating the prey | 2. Owl |
| **c.** An animal with a bowl- like face and strong senses of hearing and vision. | 3. Snake |
| **d.** it is the visible form of energy that is transmitted in the form of waves/ | 4. Bat |
| **e.** A structural adaptation in the eye that provides some animals with better vision at night. | 5.Mirror-like membrane |

# Governorates Exams 2o21- 2022 – Exam (4)

## 1.Choose the correct answer:

① The organ responsible for the sight sense is ............

a. Nose b. eyes c. heart d. mouth

② Which feature of the light help you see yourself in the mirror?

a. Refraction b. Reflection c. Shortness of rays d. Nothing

③ The measuring unit of speed is ................

a. m/s b. km/s c. s/m d. no correct answer

④ when a body moves forward, the change that occur is ..........

a. the position of the body b. the size of body c-the mass of body d-The Earth's gravity

⑤ Tarsier monkey is a ...................... animal

a. morning b. nocturnal c. harmful d. flying

## 2. Put (√ ) or (X):

① penguins forming large group is a structural adaptation. ( )

② The skin is the sensory organ that makes you feel the smoothness of the cloth. ( )

③ The brain is responsible for processing information. ( )

④ The chemical potential energy in the car fuel is converted into kinetic when car starts moving. ( )

⑤ Mass doesn't affect the kinetic energy. ( )

## 3.(A) Complete the following sentences from the two brackets:

① From the opaque objects ................. (Carton - Glass)

② Bats use ................ as a means of communication with each other. ( sound - light )

③ The diaphragm rises up during the .......... process. (Inhalation - exhalation)

④ the car slows down its speed when it turns out to fuel as a result of.. (friction - Tension)

**(B)** Calculate the speed of a train that covers 600 km in a time 6 hours.

..........................................................................................................................

..........................................................................................................................

# Governorates Exams 2o21- 2022 – Exam (5)

## 1.Choose the correct answer:

① The chemical energy stored in batteries is considered a form of ........................

a. potential energy b. heat energy c. kinetic energy d. Light energy

② bees can communicate with each other through..........................

a. Sounds b. Movement c. Waving d. -Reading

③ ............... Is covering the body of panther chameleon

- Heavy hair b. Thick fur c. heavy skin d. colorful scales

④ One of the behavioral adaptation that help animals to hide from their enemies is.........................

a. reproduction b. extinction c-camouflage d-immigration

⑤ When light falls on wooden surface, it will .....................

a. refracts b. reflects evenly c. reflects unevenly d. pass through the surface

## 2. Put (√ ) or (X):

① The brain is responsible for processing Information. ( )

② The Moon is a source of light. ( )

③ Gravitational force is an upward pulling force. ( )

④ Animals can use more than one sense to communicate with each other. ( )



## 3. (A) Match:

| (A) | (B) |
|---|---|
| 1) Motion | a) The ability to do work. |
| 2) work | b) the change in the position of an object with respect to a fixed point |
| 3) Energy | c) The force that causes the body to move. |
| 4) Gas oven | d) It converts chemical energy into heat energy. |

## (B) Answer the following:

- Look at the path of the light rays in pictures (A) and (B). Determine which of the two objects is opaque and which is transparent.

(Object) (A) is ………………………………………

(Object) (B) is……………………………………………

(A) (B)

## Governorates Exams 2o21- 2022 – Exam (6)

## 1.Choose the correct answer:

① …………………….. are panting to lower their body temperature.

a. Bats b. Lions c. Whales d. Foxes

② Humpback whales use singing for ………………………

a. heating b. reproduction and nutrition c. hiding from enemies d. having fun

③ Tapetum lucidum exists in all following excepts ………………………..

a. The Horse b the human c. the cat d. the dog

④ The energy gained by a ball when it falls from above is:

a. Potential energy b chemical energy c. kinetic energy d. light energy

⑤ In the opposite figure:

(1) (2) (3) (4)

Which ball has the greatest potential energy?

a. 1 b. 2 c. ( 3 ) d. (4)

## 2. Put (√ ) or (X):

① The snakes have the ability to rotate their heads in all directions. (   )

② Red and green lights are considered codes. (   )

③ Gravitational force is an upward pulling force. (   )

## 3. (A) Match:

| (A) | (B) |
|---|---|
| 1) The brain | (   ) a- Not important in processing or receiving informati |
| 2) Nerves | (   ) b- It is similar in its processing of information to a computer |
| | (   ) c- Carry messages to brain via the spinal cord. |

## 4. Answer the following:

(A). Butterflies that have same color of the tree they live on. This is called ……………………………….

(B).Write the reason that makes cats have excellent night vision and hunting successfully at night……………………………..

## 5. Complete the following sentences from the two brackets:

① The different two languages are considered …………….. (Codes - Lights)

② When light falls on an object and the light ……………. So, We can see this object (Refracts - reflects )

③ The diaphragm rises down during the ………. process. (Inhalation - exhalation)

④ the body that has potential energy is in …………….. state (motion -rest)

# Governorates Exams 2o21- 2022 – Exam (7)

## 1.Choose the correct answer:

① **The organ responsible for the sight sense is …………**

**a. Nose** **b. eyes** **c. heart** **d. mouth**

② The ability to turn the head in all directions …………………

**a. Dolphin** **b. Snake** **c. Owl** **d. fennec fox**

③……………… energy affects sensory receptors in eyes causing vision.

**a. sound** **b. heat** **c. Chemical** **d. light**

④Your sensation of hot weather depends on sensory receptors in the.....

**a. eyes** **b. skin** **c-nose** **d-ears**

⑤ **Jerboa is a ………………….. animal.**

**a. morning** **b. nocturnal** **c. harmful** **d. flying**

## 2. Put (√ ) or (X):

①**Sending bad smell by acacia tree is a behavioral adaptation.** ( )

② **Speed is a physical quantity.** ( )

③ **All different languages not considered as codes** ( )

④**In electric fan, kinetic energy is converted into electric.** ( )

⑤**Collision is crashing two objects each other.** ( )

## 3.Match

| (A) | (B) |
|---|---|
| 1) the spinal cord | ( ) a- Its similar in its processing of information t computer. |
| 2) using the sense of sight | ( ) b- when a foreign object is brought to your eyes |
| 3) the brain | ( ) c- when an object falls from your hands |
| 4) the reflex actions | ( ) d- the transmission of commands to the muscles to contract |

# Exam (8)

## 1.Choose the correct answer:

**① All the following sentences are correct about stomach, except ……………**

a. It connects with anus.
b. It connects with esophagus and small intestine.
c. the food changes into soupy liquid inside it.
d. It has gastric juice and muscles work together.

**② Sound and light are two types of energy where, ………………………..**

a. The sound energy can be seen, while light energy can't be seen.
b. the light energy can't be seen and sound energy can't be seen.
c. Both can be seen.
d. Sound energy can't be seen, while light can be seen.

**③Antelope that live in wide, open plains must adapt by using……..**

a. Thick fur which helps to keep them warm in winter.
b. Long legs which help them run fast
c. bright colors to help them attract a mate
d. Their hard outer shell to protect them

**④When Light falls on a rough surface, it is ……………………..**

a. Reflected
b. Diffused (Scattered)
c. Absorbed
d. Transmitted

**⑤ Which type of energy can travel through a vacuum (transparent bag).**

a. Light
b. Sound
c. Chemical
d. Potential

## 2. Put (√ ) or (X):

①humpback whales produce only one type of songs. ( )

②the bus that covers 60 kilometers in 1 hour has a speed = 60m\sec. ( )

③some of kinetic energy is changed during collision of balls in Newton's cradle. ( )

④ digestion process begins in stomach with the help of salvia. ( )

⑤some animals have extra abilities that human do not have, and these extra abilities are called super sensory adaptations. ( )

## 3.Match

| (A) | (B) |
|---|---|
| 1. Airbag | a. is used for stopping both of the shockwave truck and rockets. |
| 2. Jet engine | b. is used for knocking down |
| 3. Wricking ball | c. is used to reduce the speed of a person moving forward. |
| 4 . Parachute | d. d. Is used for telling the blind person the direction when it vibrates. |
| 5. Blind person's cane | e. is used for moving the shockwave truck. |

## 4. Mention examples:

1. **Transparent material.** (...........................................................)
2. **Sources of light.** (...........................................................)
3. **Patterns of codes** (...........................................................)
4. **Forms of potential energy.** (...........................................................)
5. **Rough materials.** (........................................................ )



## 5. Correct the underline:

1. A ball's **potential** energy increases as it slides down on inclined surface. (…………..…)
2. The **spinal cord** is responsible for processing information coming through eyes. (…………….)
3. By increasing the number of fire extinguisher, the speed will **decrease**. (.......………)
4. Humpback whales have **similar** sounds according to the season. (…………….)
5. the ability to do **force** or cause a change is known as energy. (..……………)

## 6. Write the scientific term:

1. . Bouncing of light when it falls on a reflecting surface. (.........................)
2. It is the change in position of an object relative to its starting point. (......................... )
3. the change in the living organism's behavior allows it to survive in it's habitat. (.........................)
4. the waves that travel through air in a straight line causing vision. (.........................)

# Governorates Exams 2o21- 2022 – Exam (9)

## 1. Choose the correct answer:

① fish extracts oxygen out of water through ......................

a. skin  b. gills  c. lungs  d. fins

② The ............. system helps us to translate messages that come from our surroundings, such as smells and sounds ...............

a. respiratory  b. nervous  c. digestive  d. circulatory

③ The surface that regularly reflects light is

a. dark and impurities  b. smooth and shiny  c. transparent  d. rough and dark

④ What is the speed of a train that travels 800 meters in 4 seconds?

a. 40 m/s  b. 4 m/s  c. 200 m/s  d. 80 m/s

⑤ All the following represent the pushing force except ................

a. kicking a ball  b. pressing on electrical switch

c. closing the disk's drawer  d. dragging the hook after catching a fish

## 2. Put (√ ) or (X):

① Red and green traffic are considered codes. (  )

② The eye is the sensory organ that makes you feel the smoothness of the cloth. (  )

③ The thick fur that some animals possess to protect from the cold is considered a behavioural adaptation. (  )

④ In the fan, the kinetic energy is converted into electric energy. (  )

⑤ Gravitational force is one of the kinetic energy forms. (  )



## 3. Write the scientific term:

1. A process through which diaphragm expands and moves up. (............................)
2. It is the energy transferred by a force that used to move the object. (............................)
3. It is a push or pull that is applying to an object causing it to change its position. (............................)

## B) Explain:

**1. There are some nocturnal animals that depend on their sense of heat to get their prey. Explain with an example.**

..........................................................................................................................................

..........................................................................................................................................

# Governorates Exams 2o21- 2022 – Exam (10)

## 1. Choose the correct answer:

① Bats are …………………… animals

a. Nocturnal  b. moving  c. not hearing  d. not flying

② The ability to do work is ……………

a. Energy  b. Force  c. Push  d. Pull

③ All of the following are components of the nervous system except ……………

a. Spinal cord  b. heart  c. nerves  d. brain

④ The chemical energy stored in batteries is considered a form of …………………..

a. potential energy  b. heat energy  c. kinetic energy  d. light energy

## 2. Put (√ ) or (X):

① In order to translate the code, the brain must identify it. (   )

② When a pen falls down from your hand, then the acting force is the gravity force. (   )

③ The respiratory system is responsible for the entry of air into the body. (   )



## 3.Match:

| (A) | (B) |
|---|---|
| 1)Kinetic enegy | a)A form of energy. |
| 2)Sound energy | b) A part of the car that shows the change in speed. |
| | c) It is the produced energy during the motion of the objects |

## 4.Complete the following sentences using words between brackets:

1. The eye sends messages to ………….. through the nerves. (brain – Spinal cord)
2. The fatty layer under the animal's skin which warms it is considered a (structural– behavioral)
3. When a person pushes a car forward, his body begins to sweat heavily because his body ……………. his stored energy. (consumes- increases)

## 5. Answer the following questions:

1. Note the following two figures. Identify the name of each of the two processes in figures (1) and (2).

Process (1): …………………. Process (2): ………………….

2. What happens to diaphragm in figure (1)?

…………………………………………………………………………………

1  2

# Governorates Exams 2o21- 2022 – Exam (11)

## 3. Choose the correct answer:

① .................. Use panting to lower their bodies temperature.

a. Foxes b. Cats c. Bats d. Whales

② All of the following are components of the respiratory system except ...........

a. lungs b. brain c. diaphragm d. nose

③ When you determine a sweet or bitter taste, you use ...............

a. The eye b. The tongue c. The human d. The nose

④ Which One of the following allows passing of the light through it? ..............

a. Wood b. Glass c. A rock d. Moon

⑤ Tapetum Lucidum exists in all of the following except ............................

a. the house b. the human c. the cat d. the dog

## Put (√ ) or (X):

① Gravitational force is an upward pulling force. ( )

② Bees can know the sweet teste by their sense of smell. ( )

③ Wall is an opaque object that doesn't allow light to pass through it. ( )

④ Plants have two types of adaptation. ( )

⑤ Respiration is a process of pushing air in and out of the body. ( )



## 3. Complete the following sentences using words between brackets:

1. The car slows down its speed when it runs out of fuel, as a result of ..... (tension – Friction)
2. A body that has potential energy is in ............... state. (rest – motion)
3. The eyes sends message to ................ through the nerves. (Brain – Spinal cord)
4. ................ mix and grind food inside the mouth. (Teeth only – Teeth and tongue)
5. Bats use their sense of .............. to avoid danger. (Hearing – smell)

## 4. Complete the following sentence:

① If two carse moved at the same time for 20 seconds, car (A) covered a distance of 100 meters, while car (B) covered a distance of 300 meters. Which one of the two cars has a higher speed.........................................................................................................................

② Two balls have put at different height, Ball (A) at height 2 meters, while ball (2) at height 4 meters. Which one of the two balls has a higher potential energy?

.......................................................................................................................................

.......................................................................................................................................

## Governorates Exams 2o21- 2022 – Exam (12)

## 1. Choose the correct answer:

① The measuring unit of the distance is .......................

a. km/s b. m/s c. km d. kg

② The force that pulls objects down toward to the center of the Earth is ..........

a. gravity b. pulling c. friction d. pushing

③ You could determine how loud the train sound is by ................

a. Sound pitch b. Sound style c. sound echo d. sound type and style

④ Bees can communicate with each other through ......................

a. sounds b. lights c. odors d. movements

⑤ Writing is a kind of ................

a. colors b. waves c. lights d. codes

## 2. Put (√ ) or (X):

① Force is energy and there is a relationship between them. ( )

② The brain translates the code that it cannot identify . ( )

③ The mouth helps to push food into the stomach. ( )

④ Energy doesn't transform from one form to another. ( )

⑤ When you push a car and it doesn't move so there is a work done. ( )



## 3. Answer the following question:

(A) What are the factors on which the velocity (speed) of a moving object depends? 1. ......................... 2. ............................

(B) How can we calculate speed? Write the mathematical rule.

.................................................................................................................

.................................................................................................................

(C) Mention two examples of the structural adaptation of fennec fox?

1. .............................................................................................................

2. .............................................................................................................

# Governorates Exams 2o21- 2022 – Exam (13)

## 4. Choose the correct answer:

① Our eyes help us see what's around us. What is the responsible for perceiving what we can see with our eyes? ......................

a. The stomach b. The nerve c. The brain d. The heart

② Eagle is a kind of prey bird (which eats meat). Its beak strong and sharp. This structural adaptation helps it to .........................

a. see b. cut meat c. find a shelter d. fly faster

③ Which one of the following is an example of the conversion of kinetic into potential energy: ..............

a. a ball falls from the top of a hill b. Raising a roller coaster to the top of a hill

c. pushing a ball on the ground c. A roller coaster falls to the bottom of a hill

④ The ............. system helps us to translate messages that come from our surroundings such as smells and sounds.

a. digestive b. circulatory c. nervous d. respiratory

⑤ What happens when a driver presses the brakes and stop suddenly?

a. The passenger moves backward b. The passenger moves forward.

c. The passenger remains stable d. No correct answer



## 5. Put (√ ) or (X):

① The ear is the sense organ which is responsible for seeing objects. ( )

② A static ball moves on the ground if it is affected by a force. ( )

③ Speed is a physical quantity. ( )

④ If I can see my face clearly on a surface, this means that it is a smooth, shiny surface. ( )

⑤ Some animals that live in cold have long ears; To help them to maintain the body temperature warm. ( )

## 3.Match:

| (A) | (B) |
|---|---|
| 1) Light | a)An animal with a bowl-like face. |
| 2) Owl | b) It is a visible form of energy that is transmitted in the form of waves. |
| 3) The bat | c) Feeds on small lizard and birds |
| 4) Tarsier | d) It depends on the echo of the sound in locating the prey. |

## 4. Complete the following sentences from the two brackets:

①If several bodies covered equal distances in .......... time, Then these bodies move at different speeds. (equal – different)

② .................. helps owl to pick distant sounds and amplify them. (Head rotation – Specialized head feathers)

③An animal that can escape from enemies because of the length its hind leg ..................... (Arctic fox – Jerboa)

## 5. Answer the following questions:

①Some animals have thorns to defend themselves against enemies. What type of adaptation? ..........................................................................................

②The code can be expressed by using some patterns Give one example ..........................................................................................

③ Butterflies that have colour like the colour of the tree they live on this phenomenon called ..................................................